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AUGUST 2005

American Cinematographer

THE ISLAND

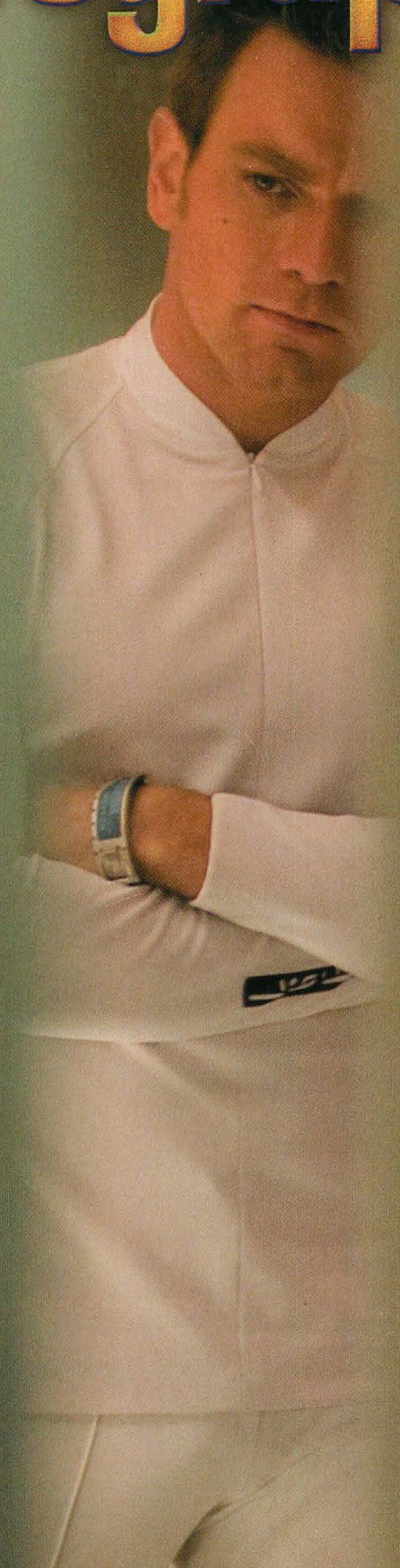
MAURO FIORE, ASC
FRAMES FUTURE DYSTOPIA

DARK WATER

AFFONSO BEATO, ASC, ABC
LETS TERROR FLOW

PLUS:

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Paradise Lost

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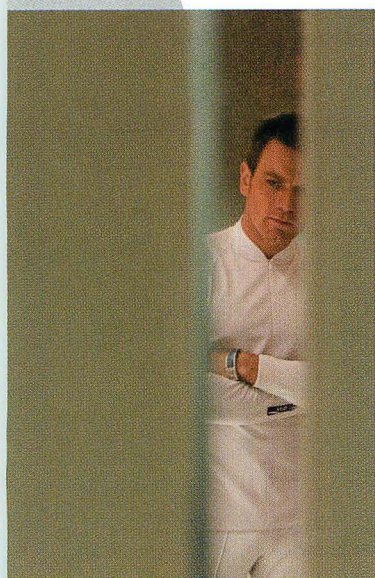
Runaway Plane

Dean Semler, ASC, ACS straps into a high-tech cockpit for *Stealth*

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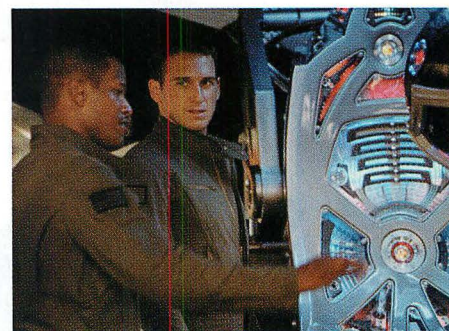
Director of photography Ross Emery, ACS and underwater cinematographer Wes Skiles mix formats for *The Cave*



On Our Cover:
Lincoln Six-Echo
(Ewan McGregor), a
human clone, finds the
walls closing in on him
in the sci-fi thriller *The
Island*, shot by Mauro
Fiore, ASC. (Photo by
Merrick Morton,
SMPSP, courtesy of
DreamWorks Pictures.)



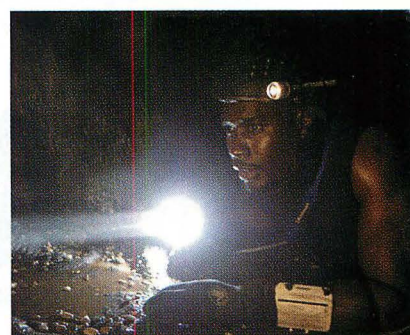
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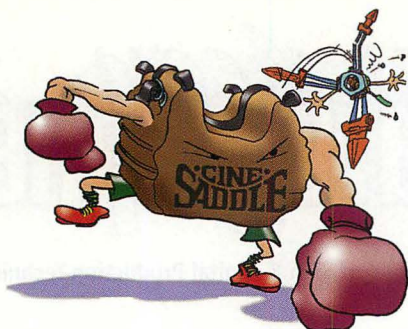
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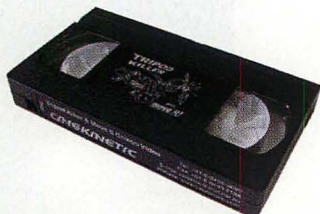


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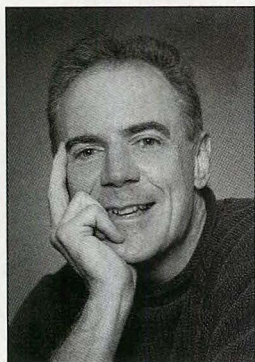
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THE ART OF CINEMATOGRAPHY.



Editor's Note

President's Desk



It must have been the stunned look on my face that caused the ticket taker at Yankee Stadium to make a remark as I passed through the turnstile a few weeks ago. "You made the choice. It'll be worth every dime," were his exact words — considerably less encouragement than I expected, given the astronomical sum I had just paid for a passable pair of box seats. It had been almost seven years to the day since I had last made the pilgrimage a major-league park, and things had changed more than I imagined. Now, the promotional atmosphere is much louder, more relentlessly percussive. The style of the game itself more often favors flash rather than substance. And prices for everything, from peanuts to bottled water, are positively through the (soon-to-be-retractable) roof. It dawned on me that the guy a few steps ahead of me in the line, who had five kids in tow, was making a substantial contribution toward paying off all of those multi-year contracts.

But as the ticket taker intimated, no one forced any of us to come out to the ballgame. He was also right about the value of what we were getting. Once I settled into my seat, I had the immense pleasure of watching some of the best players alive glide through the game with such casual ease that I almost felt I could step onto the field and do it as well myself. As someone who went pretty deep into amateur and college baseball, I assure you that this vicarious notion was nonsense. But on the flip side, what if the catcher or centerfielder wanted to drop by a soundstage and try lighting one of our sets? That would be nonsense, too. And it brings to mind some thoughts about our industry.

How is it that as of this writing, attendance at movie theaters nationwide is down for the 18th consecutive week? It's certainly not for lack of expertise in technology or craft. Indeed, cinematographers of a particular level are the equivalent of major leaguers in every way. Right now, along with our chief collaborators, we're operating on a higher level of sophistication than at any other time in our history, even compared to a year or two ago. And everyone else — performers, marketers, exhibitors — is at the top of their game in their own way. Writers, on the other hand, too often get blamed for the generally poor state of studio films, and that's really unfair. Judging by what's playing at the multiplex, you'd never guess that there are any good scripts floating around Hollywood. The fact is, there are quite a few, and their existence points out something the industry seems to have forgotten: *Story supercedes all!*

If the executives who decide which stories get produced are searching for an answer to the attendance problem, they need look no further than their own desktops. While everyone else has been busy leaping forward in terms of *how* movies are made, they have consistently failed to greenlight good material — for whatever reason. ASC Lifetime Achievement Award recipient William A. Fraker, ASC always carps that there's no leadership in Hollywood today. He's 100-percent correct. He's also speaking as part of the generation of cinematographers who made their names during the 1970s, the last Golden Age of movies. Only now can we see what an anomaly that period represents. Imagine: intelligent filmmakers making intelligent films for adults. Many of them drew mass audiences and were wildly successful at the box office. It makes you wonder where things went wrong.

Clearly, when it comes to choosing what gets made, those running the studios and many of the independents are either out of touch or have lost their touch.

A lot of old-timers like to claim that baseball was a better game back when players needed to have another job to support themselves through the offseason. Maybe a little taste of that ethic would help bring back a sense of perspective to the decision-makers in our industry.

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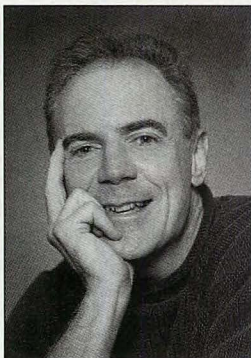
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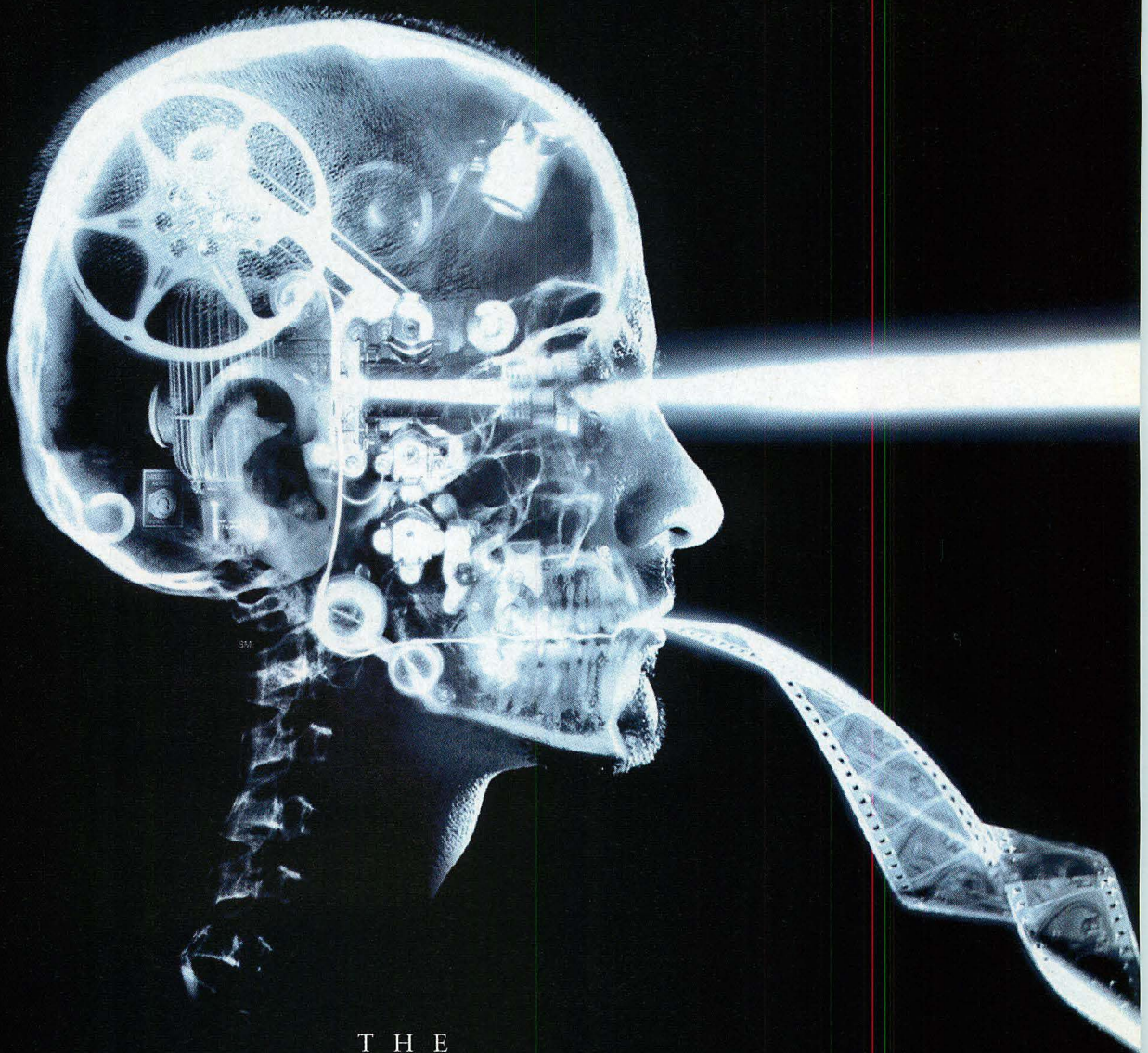
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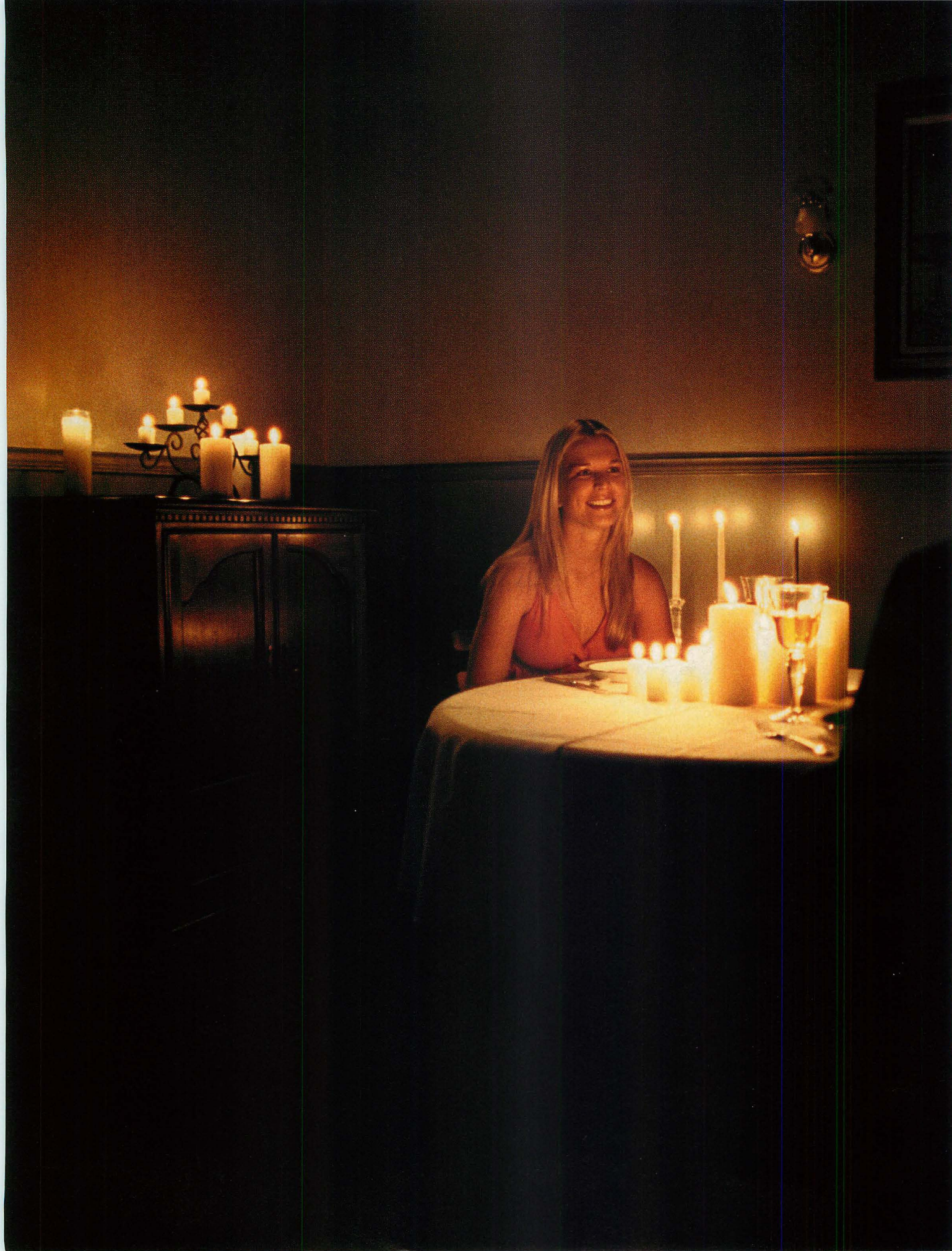
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T 1.3

— 16 mm

— 18 mm

— 21 mm

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Candlelight image created with a Master Prime lens at T 1.3

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Global Village

March of the Penguins: An Epic Waddle

by John Calhoun



Above: The emperor penguins' annual trek of more than 100 miles to breeding grounds was captured on film in *March of the Penguins*. **Right:** Parents are very protective of their chicks.

In the first long-distance shots of the figures walking in formation across the ice, they look like strange, squat humans embarking on some mysterious expedition. As the camera moves closer, one gradually perceives that the hundreds of figures marching single-file

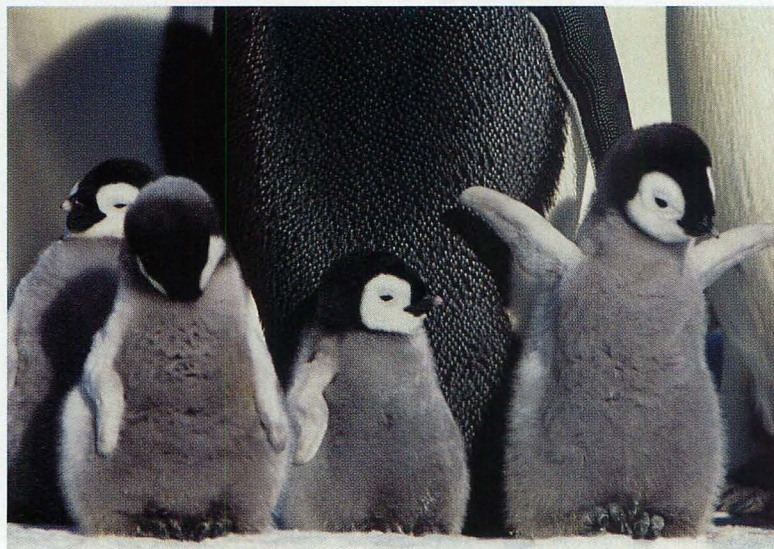
against the blinding white Antarctic backdrop are not human at all, but 3½'-high emperor penguins, the largest and perhaps least understood species of penguin.

Every year, as winter sets in, these creatures leave their ocean feed-

ing grounds and make the 100-mile-plus trek to an ancestral field deep in the frozen interior. There, they court and mate; sometime later, a single egg is produced, which is vigilantly protected from the elements by the parents, as is the chick that eventually emerges. After months of not feeding, the female returns to the sea for sustenance, and then walks back to the breeding grounds to spell her starving mate so he can make the same trek.

This odd behavior has left those who have studied it perplexed, but it was recently captured on film for the documentary feature *March of the Penguins*. Director Luc Jacquet, who trained as a scientist and made six previous nature documentaries, wanted to give the penguins' story more of a narrative than the average wildlife film; he therefore composed a dramatic script that is read in voiceover on the movie's French-language soundtrack. (The U.S. theatrical release will feature straightforward documentary narration by actor Morgan Freeman).

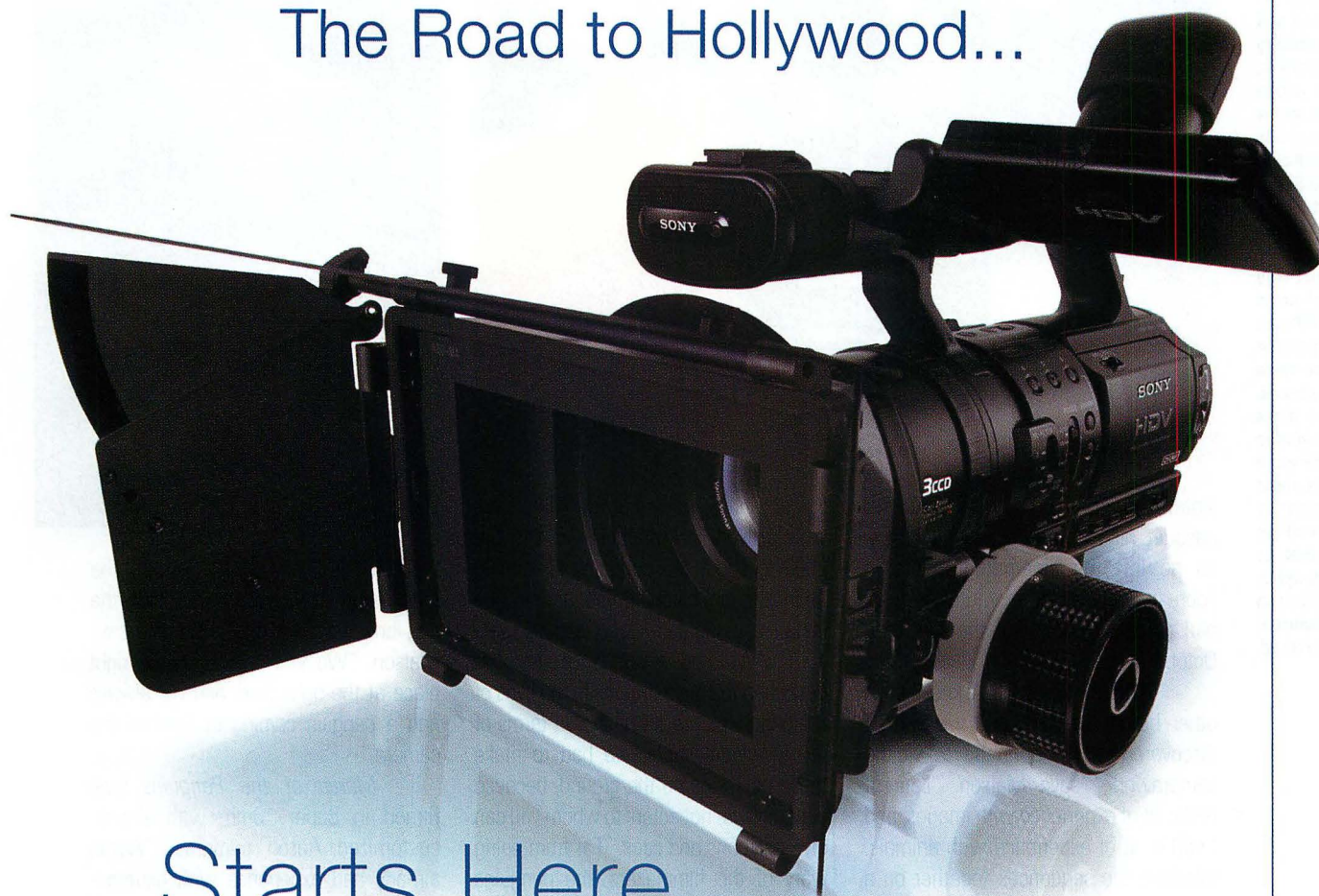
Jacquet enlisted the services of two cinematographers, Laurent Chalet and Jérôme Maison. "Laurent and Jérôme have very, very different backgrounds," says the director, who previously shot his own documentaries. "Jérôme was my assistant for three years, so he knew very well how I worked and the kinds of things I wanted. Laurent came from feature-length fiction; it was very important for me to have someone who could work on the basis of a script and a shot list." It was also important for the cinematographers to collaborate smoothly, because they were more or less stranded together at the Dumont d'Urville research station in



Photos courtesy of Warner Independent Pictures.

SONY

The Road to Hollywood...



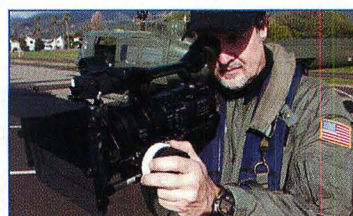
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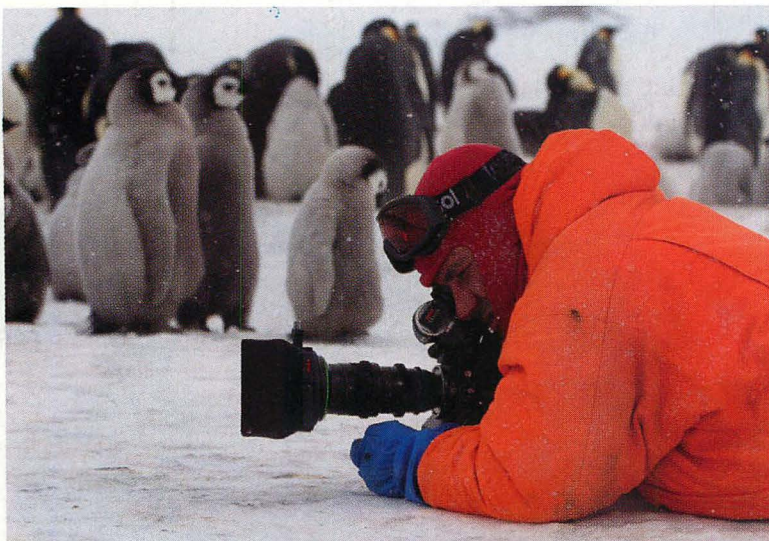


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HDV™

Near right: Director Luc Jacquet, a scientist and documentary filmmaker, mingles with a party of penguins to get close-ups with an Aaton XTRprod Super 16mm camera. Far right: Though the Antarctic nights aren't very dark the crew had HMIs on hand to provide some extra exposure. Below: The film's investigative subjects were curious about the documentary crew and the equipment, as cinematographer Jérôme Maison (pictured) discovered.

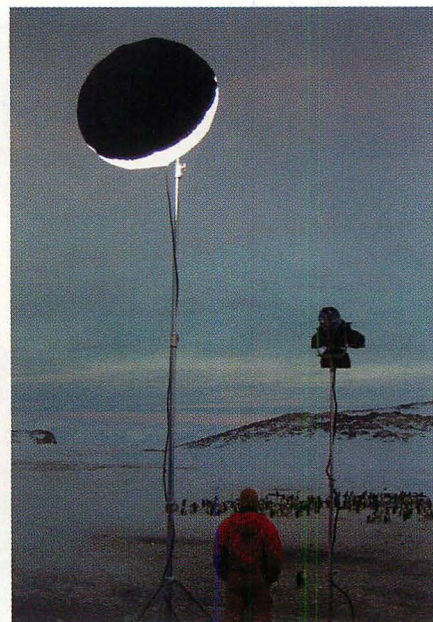


Antarctica for 10 months. (As for Jacquet, his wife was expecting a baby, so he left the cinematographers in February 2003, before winter arrived, and did not return until the following October.)

"Laurent and I didn't know each other before we left, and we sort of discovered each other on the ice, via the camerawork," says Maison. "Laurent had a lot of experience with images, and I had a lot of experience with animals. We built the sequences together on a day-to-day basis; I shot the shots I wanted to shoot, and he shot the shots he wanted to shoot." Maison also did live sound recording, having taken a crash course with Nagra equipment before embarking on the adventure. In addition, he assisted underwater direc-

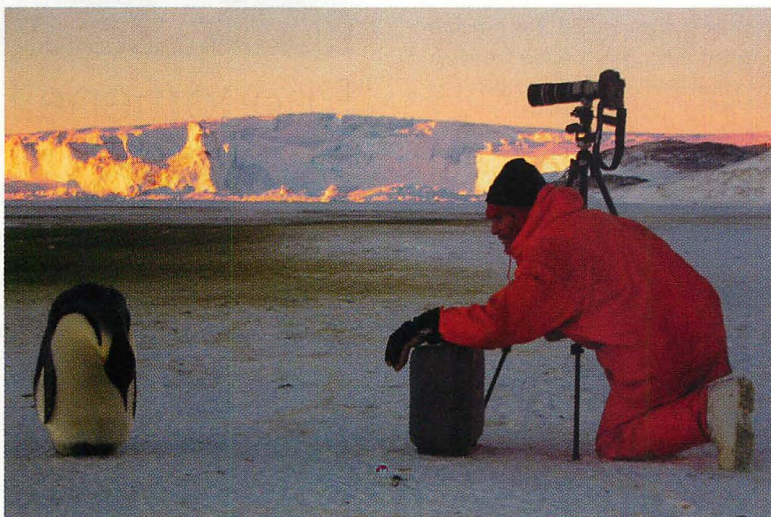
tor of photography Patrick Marchand, who arrived in Antarctica in October 2003 to shoot the penguins swimming under the ice, catching fish, and, in one instance, being eaten by a leopard seal.

"We had a sequence list that described the big moments in the lives of the penguins," says Chalet. "In terms of the individual shots, we had to make those decisions on the ground, because penguins are not actors to whom you can give positions and cues." Far from being wary of the filmmakers, the penguins were so curious about their new companions that they often interfered with important shots. The delicate transfer of the egg from female to male, for example, had to be shot close in and captured at just the right moment. "There were 1,000 penguins on the ice,

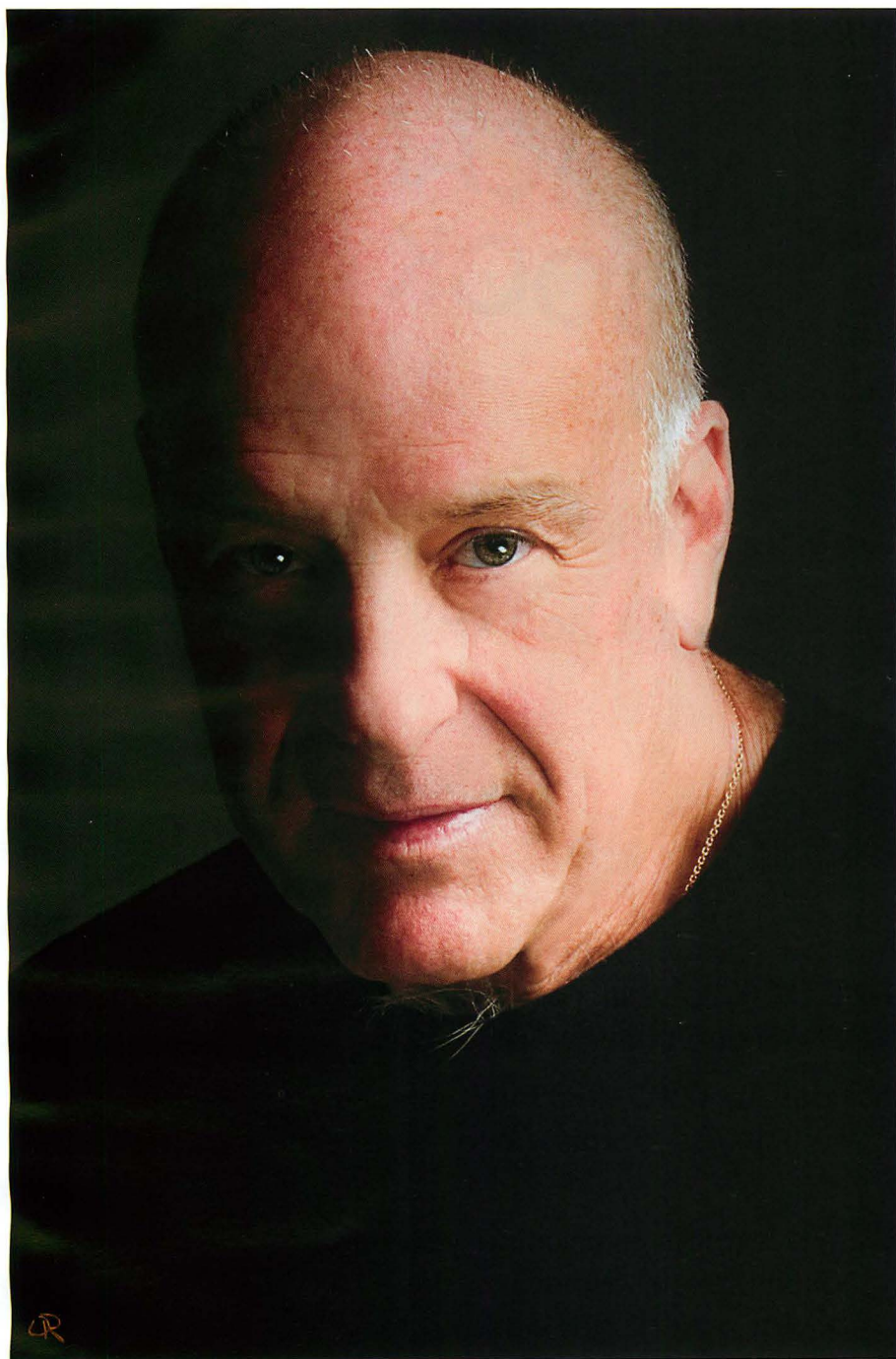


we had this heavy equipment, and the time when they were transferring the egg only lasts several seconds," says Maison. "We were never in the right place at the right time, and we always had a penguin coming in front of the camera."

March of the Penguins was filmed in Super 16mm with slightly customized Aaton cameras. "Aaton already had experience with extreme-cold equipment," says Chalet, who was tasked with choosing the production's cameras, lenses and film stock. The cameras were tested for -40°C, which was about as cold as it got where the filmmakers were. "We took all the grease off the camera bodies and used specialized lubrication so that the cameras could continue to function." The Aatons were equipped with Optek 14-480mm zoom lenses. "I chose zooms because we couldn't change lenses on the ice field," Chalet explains. "We also had special 800-foot film magazines, because changing the magazines in the wind and ice would have been very dangerous for the exposed film." The cinematographers used Kodak Vision2 500T 7218 for night scenes, and Eastman EXR 50D 7245 for daylight. Chalet explains, "The light [in the Antarctic] is very, very strong; it's like filming at the top of a mountain, so we needed a stock that would have a very fine grain and



CHARLES ROSHER JR., ASC



©photo by Owen Roizman, ASC

“My father was one of the principal founders of the ASC, and he had American Cinematographer at the house all the time. I had no understanding of cinematography whatsoever, but being a young boy, I was fascinated by the pictures and always looked forward to the magazine coming every month. From the time I said, ‘I think I’ll be a cameraman,’ I looked at AC from another point of view; I started to study and learn from the magazine what other cinematographers did. It is such a great resource from which to learn and compare technologies and working styles. Even to this day, I can’t wait to read it.”

— Charles Rosher Jr., ASC

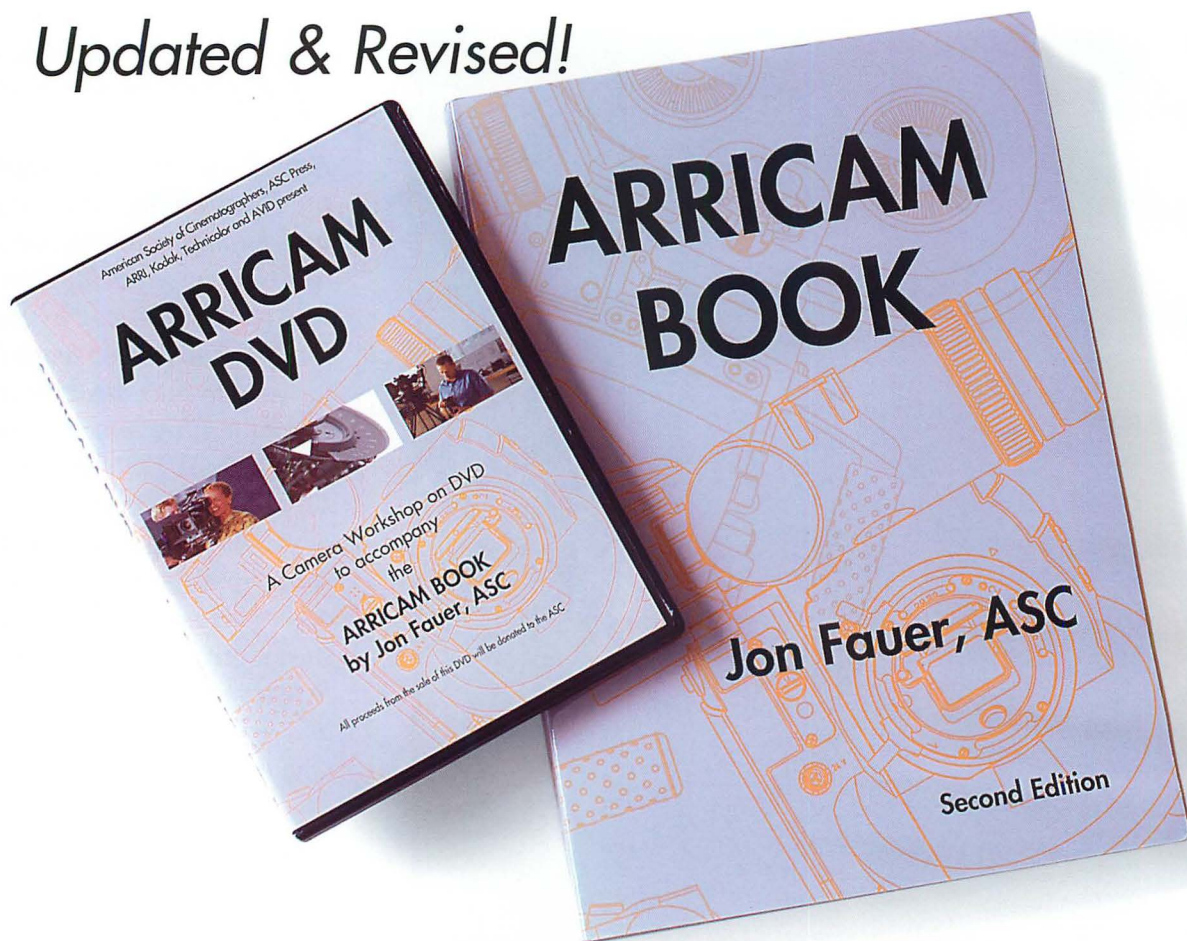
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could sustain the blowup to 35mm." (The 2K digital intermediate and transfer to 35mm were carried out at Éclair Laboratories.)

In anticipation of the long Antarctic winter, the filmmakers stocked two of every piece of equipment in storage, knowing that they would have no way to transport additional items through the harsh conditions. "We also had spare parts," say Jacquet. "We were in a station where people know how to do everything: they can fix any electronics they come across, and they can literally create mechanical parts if necessary." The cinematographers ended up shooting about 140 hours of film, which Jacquet then whittled down to 85 minutes. "We gathered a huge amount of footage for two reasons," says the director. "First of all, [that approach was] our only insurance; one roll and the next had to have the same exposure and work together. We couldn't develop anything, so we had no idea how we were doing. Also, the environment was so beautiful that it was difficult not to keep filming."

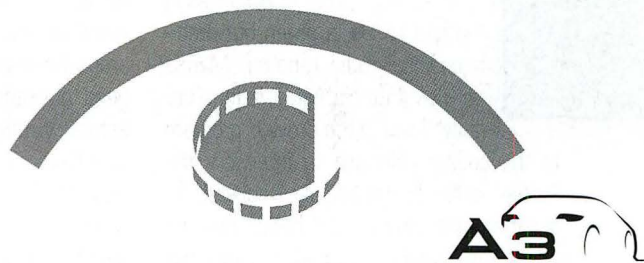
As it turned out, the filmmakers had few technical problems, and most of their footage came out perfectly. "It was our own adventure that was surprising," says Chalet. "For instance, in September we had gone a little bit away from the station to work on some icebergs, and we got caught in a Katabatic wind. [Ed. Note: A Katabatic wind is an often vicious wind that blows down a topographical incline.] We had an extremely hard time getting back to the station. At one point, I went through the ice, and Jérôme's face was very, very burnt. We had to stop shooting for a month, but thankfully, we had already got the sequences we needed." Adds Maison, "We were aware that we weren't made to live in Antarctica, but we were carried away by our work and went a little farther than usual. Antarctica sort of reminded us that it was there, and expressed itself with a lot of strength. I'm happy to tell the story because I got out. The experience could have ended badly, but it didn't. It ended with a film."



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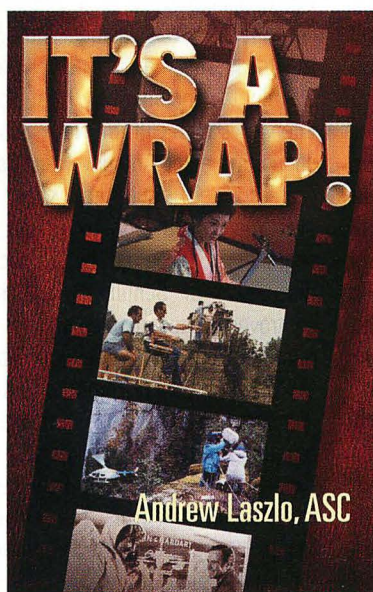


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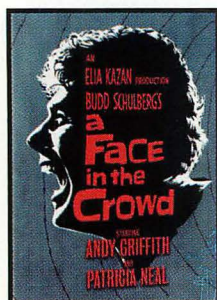
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DVD Playback



A Face in the Crowd (1957)
1.85:1 (16x9 Enhanced)
Dolby Digital 2.0
Warner Home Video, \$19.97

In a dusty corner of Arkansas in the mid-1950s, a green but ambitious local radio reporter, Marcia Jeffries (Patricia Neal), brings her daily "Face in the Crowd" program to the county jailhouse to interview the "catch" of the Fourth of July weekend. An assortment of drunks and hobos perk up when the vivacious journalist slides her microphone close to their mouths and coos, "People are fascinatin' wherever you find 'em!" One savvy "drunken disorderly," Larry "Lonesome" Rhodes (Andy Griffith), seizes the moment and manages to charm young Marcia with his homespun crooning and straightforward idealism. Wooed both personally and professionally, Marcia finds her star in Lonesome, who becomes an instant hit with her working-class listeners and is quickly given his own show. Soon, lucrative advertisement deals bring out Lonesome's more manipulative side, and it isn't long before television networks come calling. After Marcia creates a TV version of Lonesome's show, aided by a writing staff headed by Mel Miller (Walter Matthau), Lonesome's popularity grows and he becomes increasingly corrupt. He finally becomes the most popular celebrity in America, and even Washington comes calling for advice on how to win public favor. Horrified at the monster Lonesome has become, Marcia and Mel bond over their shared heartbreak. "It's dangerous," says Mel. "You gotta be a saint to stand off the power that little box can give you."

A Face in the Crowd is Elia Kazan's powerful adaptation of Budd Schulberg's *The Arkansas Traveler*, and the picture marked the Hollywood legends' second collaboration, after *On the Waterfront*. To bring the project to the screen, Kazan

enlisted cinematographer Harold Stradling, ASC (*The Picture of Dorian Gray*, *Easter Parade*), who had previously shot *A Streetcar Named Desire* for him. Kazan wanted a stark style of black-and-white that would accurately represent the world of television. Some complications arose during preproduction because of the need to photograph actual TV screens and actors within the same frame, and Stradling asked Gayne Rescher, ASC (*Rachel, Rachel*) to assist in the complicated camerawork and share his credit on the film. The resulting picture boasts a no-frills, almost documentary style for its first half, and a suitably nightmarish tabloid style for its second half.

Warner Home Entertainment's recently released DVD of *A Face in the Crowd* offers a fairly solid picture transfer that accurately reproduces the cinematographers' bold, monochromatic scheme. The only image flaws are periodic appearances of scratches and print dirt that suggest worn source materials. The monaural audio track is clean and free of distortion.

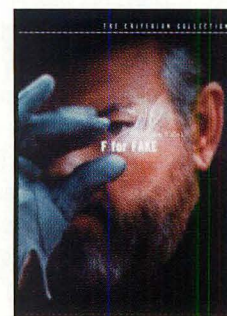
The DVD includes the film's theatrical trailer and a newly produced 29-minute documentary that features interviews with Griffith, Neal, Schulberg, supporting actor Anthony Franciosa, film professor Leo Braudy and *Kazan* author Jeff Young. Although too much of the segment is taken up by a fascinating discussion of Schulberg and Kazan's controversial testimonies to the witch-hunting House Un-American Activities Committee, the documentary features illuminating observations from the actors regarding Kazan's directing style, and an excellent interview with Schulberg. It's regrettable that this featurette isn't longer, because each of the participants has quite a bit to say.

More than 40 years after its original release, *A Face in the Crowd* remains

a frightening reminder of the media's power in American culture; in many respects, the picture's ideology was ahead of its time. Memorably played by an excellent cast and brutal in its depiction of savage narcissism, the film has only improved with age. This DVD presentation brings the tale of Lonesome Rhodes, "The Demigod in Denim," home with a sickening poignancy.

A Face in the Crowd is also available in Warner's "Controversial Classics Collection" boxed set, which retails for \$79.95 and also features *Advise and Consent*, *The Americanization of Emily*, *Bad Day at Black Rock*, *Blackboard Jungle*, *Fury* and *I Am a Fugitive from a Chain Gang*.

— Kenneth Sweeney



F for Fake (1974)
1.66:1 (16x9 Enhanced)
Dolby Digital 2.0
The Criterion Collection, \$39.95

As a young cinematographer with only a few exploitation movies on his résumé, Gary Graver called director Orson Welles and told him he'd like to work with him. Welles called back and said he was interested — the only other cinematographer who had ever sought him out was Gregg Toland, ASC (*Citizen Kane*).

Graver's phone call sparked a 15-year professional collaboration with Welles and Oja Kodar, a writer, actress

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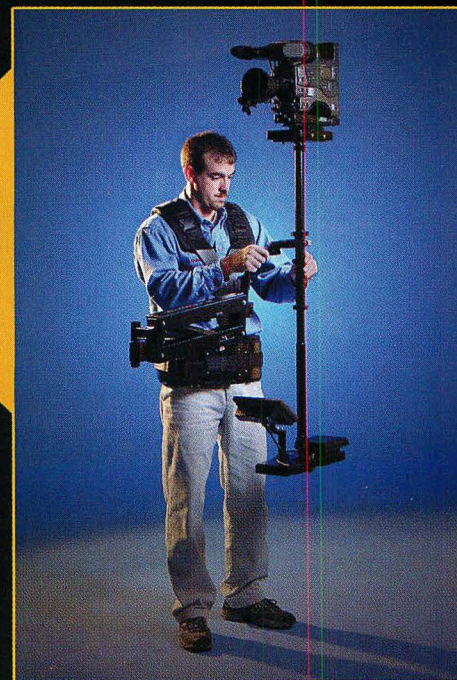
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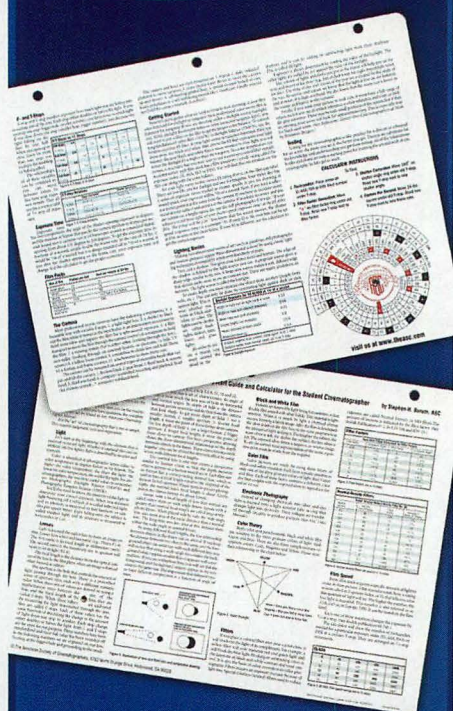


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and Welles' all-around muse. Many of their projects were never fully realized because of various financial and legal entanglements, but one that was completed is the brilliant documentary *F for Fake*, which The Criterion Collection recently released on DVD. The film uses the story of art forger Elmyr de Hory and his devious biographer, Clifford Irving (who penned a phony Howard Hughes "autobiography"), to both critique and celebrate fakery of all types — and to suggest that the lies spun by de Hory and Irving were no less valid than the truths told by the "experts" who validated their phony works.

This high-definition picture transfer is an improvement over Criterion's earlier laserdisc of the film, although the image is marred at times by scratches that appear to originate in the source material. (Welles made extensive use of found footage.) A good portion of *F for Fake* consists of preexisting material, but the movie also features some beautiful images shot by Graver that look better here than in any previous video incarnations. The best example of this is a sequence depicting an alleged meeting between Kodar and Pablo Picasso that is surprisingly lyrical for a film that owes most of its aesthetic to the documentary form.

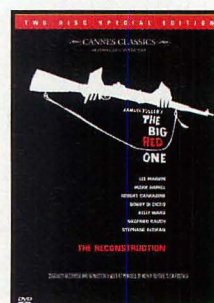
A commercial failure upon its release, *F for Fake* now appears to have been about 30 years ahead of its time. Welles' audacious fusion of personal commentary, documentary footage, and staged material presages contemporary documentaries such as *Tarnation* and *Fahrenheit 9/11*, which break down the documentary/narrative divide in an effort to reveal the filmmaker's own version of the truth. But Welles not only acknowledges the ethical and artistic perils of such an approach, he also makes those perils his central subject.

Like Jean-Luc Godard, Welles enjoyed experimenting with his promotional material. Included on this DVD is the nine-minute theatrical trailer for *F for Fake*, a fascinating extension of the themes and style of the movie. (It contains footage that was shot after *F for Fake* was completed.) Disc one of this

two-disc set also includes an introduction by filmmaker Peter Bogdanovich and a commentary track by Graver and Kodar. Though their reminiscences are enjoyable, the commentary is slightly disappointing given the richness of the film. (It's too bad film critic Jonathan Rosenbaum, who provides the disc's superb liner notes, did not participate in the commentary.)

After Welles' death, Kodar gave filmmakers Vassili Silovic and Roland Zag access to the many fragments of incomplete films the director left behind, and the resultant documentary, *Orson Welles: One-Man Band*, is featured on disc two. This supplement alone justifies the purchase of this DVD for Welles fans, as it contains rarely seen footage from projects such as *The Other Side of the Wind*, *Moby Dick*, *The Deep*, *The Merchant of Venice* and *The Dreamers*. Other supplements complement *F for Fake* by providing alternative views of its subjects; there's a documentary on de Hory, a *60 Minutes* interview with Irving, and an audio recording of a 1972 press conference in which Howard Hughes addresses Irving's hoax.

— Jim Hemphill



The Big Red One:
The Reconstruction (2004)
Special Edition
1.85:1 (16x9 Enhanced)
Dolby Digital 5.1
Warner Home Video, \$26.95

Director and former infantryman Sam Fuller once claimed that it was impossible to capture the combat experience on film, but many might argue that he proved himself wrong with *The Big Red One*. By combining his firsthand experience of combat with a reporter's eye for detail, Fuller created an affecting portrait



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of war that captured both the hell and the tedium of combat.

The epic World War II drama was cut down to 113 minutes for its 1980 release, and for many years Fuller's original cut was considered a lost masterpiece. In 1997, after Fuller died, film critic/filmmaker Richard Schickel joined forces with Warner Bros. executive Brian Jamieson to search for the excised material, and they eventually found 50 minutes of additional footage. Using camera and sound reports and the shooting script, Schickel produced a reconstruction of *The Big Red One*. The film was theatrically released last year and was recently issued as a two-disc special edition DVD.

Now clocking in at 163 minutes, *The Big Red One* is more remarkable than ever, offering visceral action, black comedy and tragedy in equal measure. As strong as the 1980 version is, the reconstruction has more emotional momentum, and some of the new scenes reveal that Fuller and his crew were ahead of their time.

Although *The Big Red One* was in many ways the culmination of Fuller's career, it represented a new beginning for gifted cinematographer Adam Greenberg, ASC. Greenberg eventually became a top Hollywood cameraman, but when Fuller recruited him for *The Big Red One*, he had only shot movies in his native Israel. The nature of Fuller's project required that Greenberg be skilled in a number of areas, including day-for-night photography and large-scale action sequences, and the DVD's excellent transfer captures the wide tonal range of the piece. The new Dolby Digital 5.1 sound mix is a bit uneven, but overall the reconstruction team did a good job of using cutting-edge technology without making the film sound inappropriately modern.

In a commentary track, Schickel analyzes the picture's themes, details some differences between the two versions, and provides information about the production. Greenberg's exquisite photography seems all the more remarkable when Schickel notes that the movie was shot in 10 weeks for

\$4 million.

Disc two contains supplements that contextualize *The Big Red One* within Fuller's career and illuminate the reconstruction process. The first is "The Real Glory," which begins with key cast members sharing some hilarious anecdotes about the shoot and then moves on to survey the reconstruction process (i.e., editing, color correction, sound and scoring). The next documentary is an episode of Schickel's TV series *The Men Who Made the Movies* that focuses on Fuller, tracing his roots as a journalist to his life as a Hollywood director. The featurette "Anatomy of a Scene" examines a few scenes from the film; some are accompanied by restorers' comments and one is accompanied by the original production sound (you can hear Fuller directing). There are also comparisons between footage from the 1980 release and the same scene in the reconstruction, accompanied by an explanation of how the technical work was accomplished.

Also included are a variety of deleted and alternate scenes and a promotional reel from 1980 that was used as a reference by the reconstruction team. (It contains longer versions of scenes shortened in or missing from the 1980 release.) Unfortunately, we haven't been given the option of watching the deleted scenes without the commentary track; this is particularly annoying for scenes that have dialogue that doesn't exist in any other form on the DVD. Nevertheless, taken together, these supplements provide a thorough look at the reconstruction process that filmmakers in every field will find fascinating.

— Jim Hemphill

NEXT MONTH'S REVIEWS

Jules and Jim (1962)
Cinematographer: Raoul Coutard

A Tale of Two Sisters (2003)
Cinematographer: Mo-gae Lee

Black (2005)
Cinematographer:
Ravi K. Chandran, ISC

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THE ISLAND, 2005

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Production Slate

Mourning Two Unconventional Pioneers

Blake (Michael Pitt), a forlorn rock star modeled after the late Kurt Cobain, stumbles inexorably toward suicide in *Last Days*, shot by Harris Savides, ASC.



Requiem for a Rock Star

by Chris Pizzello

Like John Lennon's assassination 14 years earlier, the 1994 suicide of rock musician Kurt Cobain was a pivotal event for an entire generation of music lovers. Cobain's band, Nirvana, was the rare type of group that appealed to both casual MTV channel-surfers and discerning rock critics, demonstrating that there could be a place for uncompromising artistic integrity within the mainstream. But the sensitive psyche that made Cobain such a great and resonant songwriter also made him profoundly unfit for the meat grinder of contemporary showbiz marketing. Saddled with an increasingly debilitating drug addiction, Cobain eventually fled from the spotlight, spending his final days in virtual isolation at his rural Seattle compound before ending his pain with a shotgun.

With *Last Days*, which focuses on a quiet, young musician named Blake (Michael Pitt), who bears an uncanny resemblance to Cobain, director Gus Van Sant offers an open-ended meditation

on what might have transpired in the last moments of the reluctant icon's life. The film is the last of a thematically joined trilogy that includes *Gerry* (see *AC* April '02) and the Palme d'Or-winning *Elephant* (*AC* Oct. '03). "Death is the link in all three films," Van Sant comments. "In *Gerry*, it is death by accident or misadventure; in *Elephant*, it is death by someone else's hand, and in *Last Days*, it is death by one's own hand."

Van Sant collaborated with Harris Savides, ASC on all three films, which also share a distinctive and consistent filmmaking aesthetic: long takes, spare editing rhythms, fixed settings and improvisational acting. "We wanted to get back to letting the audience experience a film, or experience an image or scene for a while, rather than telling them or showing them how to feel by cutting," says Savides.

The cinematographer explains that the roots of their approach lie far from the contemporary film scene. "One of the films that influenced us was Chantal Akerman's *Jeanne Dielman* [23 *Quai du Commerce*, 1080 *Bruxelles*],

which holds static shots for a very long time," says Savides. "Whenever a scene comes back into a room on a certain side, the camera will come back to the same specific angle, height and lens. *Jeanne Dielman* features an almost proscenium kind of shooting, where people walk in and out of a frame and the audience is left to consider what's happening outside the frame. It's about a woman who lives with her son and has a john who comes to visit her once a week. He comes in, hangs up his hat, and then there's a shot down the hallway. They enter a room, close the door, and he leaves money when he leaves. So you only just imagine that she's a lady of the night. I discovered Chantal Akerman with that movie, and it just changed everything for me.

"The other influence is the films of Béla Tarr, like *Sátántangó*, for the long takes and long camera moves. But on *Last Days*, we were mostly set inside [Blake's] house and couldn't really use those techniques. We went to a more static approach, [whereas] in *Gerry* and *Elephant*, the camera travels a lot."

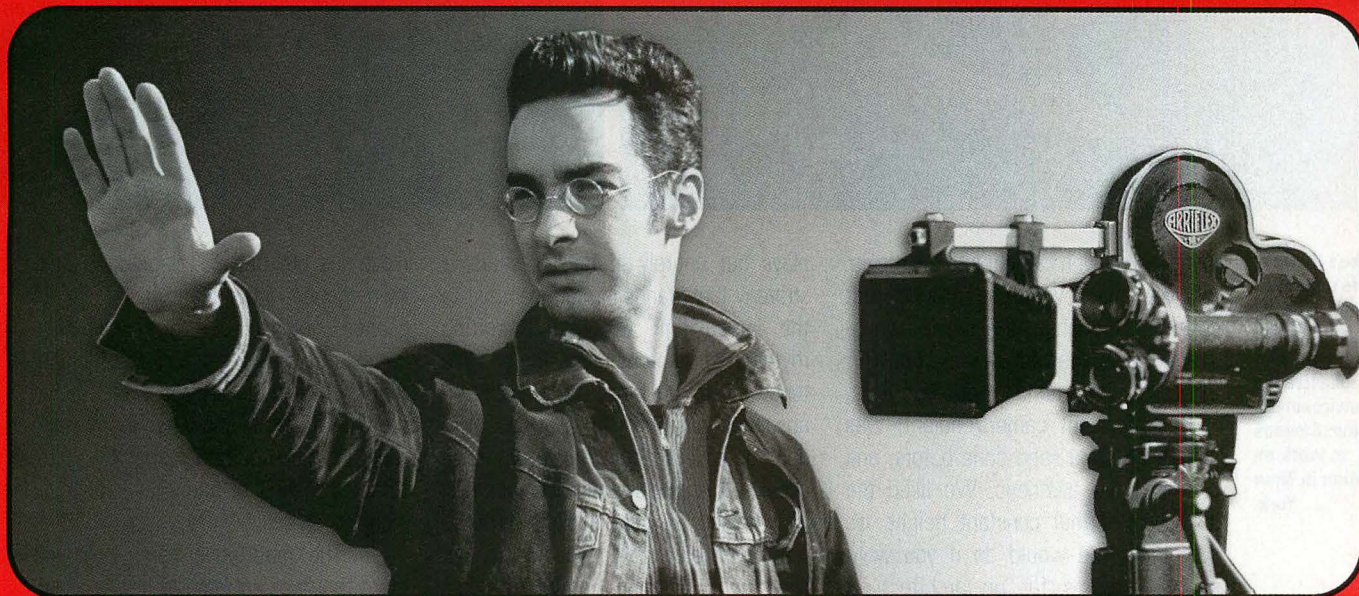
An example of this approach in *Last Days* is a scene in which Blake sits in his living room, at the far right of the frame, while a nervous acolyte at far left (Lukas Haas) inches his chair closer to the star as he gathers confidence while talking to him. Throughout the lengthy scene, the camera's viewpoint remains fixed and constant. "That placement came from one of our mandates," explains Savides. "It was the same position we'd used in another scene, when the camera was placed in the same doorway. So when we came back to that setting, we put the camera in the same place and at the same exact height. I don't even remember if the other scene

Last Days photos by Scott Green, courtesy of HBO Films/Picturehouse.

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Blake's distress is conveyed mainly in long takes and static frames that emphasize his environment. Below: Savides at work on location in New York.



in that room even made it into the movie, but we built everything around that concept. Throughout the movie, whenever possible, the camera was kept 43½ inches off the ground." Adds Van Sant, "[The consistent camera height] was something we'd seen done before, and we liked the aesthetic. We liked the simplicity of that constant height. It's something you would do if you were shooting rooms for an architectural magazine, and most of *Last Days* is set in that house."

Visual economy was one of the primary concerns in determining camera placement for other scenes, such as a profoundly awkward encounter between a disheveled Blake and an increasingly uncomfortable Yellow Pages salesman (Thadeus A. Thomas) who has paid him an ill-timed house call. The camera views both men in profile as they sit on separate couches, and their halting attempts at interaction further emphasize their psychological distance. "We wanted to do that whole scene in one shot," says Savides. "The angle we chose was the only one that displayed all of the information we needed to impart to the audience. The Yellow Pages salesman had to enter the room, talk to Blake, and then leave the room. Once we were able to find a camera placement that satisfied all of that action, we just stayed there and let it play."

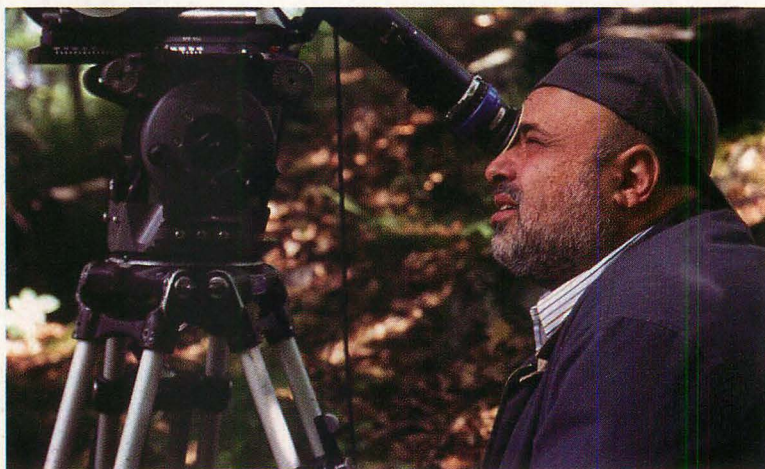
Last Days was shot in the 1.33:1 aspect ratio, and much of the picture

plays out entirely in master shots, a strategy that stands in stark contrast to the increasingly hyperactive editing rhythms of contemporary films. "We tend not to do close-ups unless we absolutely have to," says Savides. "We don't do coverage, or at least we try to avoid it. It seems to be a technique that is overused [in current films]. There's really no need to do it if you line up your shots right. That might be why viewers of this film might feel more of an openness and sense of space than they usually do."

Because Blake is often seen as a solitary and small figure amongst his surroundings, the approach also seems to highlight the character's psychological isolation, but both Savides and Van Sant are quick to deny any attempt to manipulate the audience. "There are some

close-ups, but they are relegated to their own scenes rather than cut into other scenes," notes the director. "I don't think we ever actually cut to a close-up in the film. By having Blake small in the frame, we were trying to show him in his environment, but not necessarily trying to effect a feeling of sadness or depression."

The meditative camera movement that was so integral to the visual designs of *Gerry* and *Elephant* was drastically curtailed for *Last Days*, but this was due more to logistical considerations than any aesthetic intent. "My philosophy toward camera movement has changed throughout my career, but it hasn't changed since *Gerry*," Savides attests. "It was mainly the spaces we were in that dictated the kind of movement we used on *Last Days*. Over my



career, though, I've come to understand that I should not move the camera just for the sake of moving it. [Camera movement] should always come from telling the story and understanding what that story is. It should come not from asking, 'How do I make it better and more dynamic?' but from asking, 'Do we *need* to make it better and more dynamic?' When you start out making films, you always want to make the best shots — 'Wouldn't it be cool to twist the camera and boom up?' — but cinematography isn't about that at all. In fact, [our approach] is the antithesis of that; it's about conveying information to the audience and then saying, 'Can we make it better for them?'"

Isolated scenes in *Last Days* do feature subtle camera moves that have a powerful effect. In one sequence, the camera films Blake from outside the house as he plays musical instruments in his studio, and it inches back ever so slowly until he is a tiny figure framed through glass windows in a shot of the entire house. Savides' crewmembers helped achieve the shot by removing dolly track while the camera was pulling back, and the resultant composition eloquently implies Blake's prison-like seclusion.

Although the filmmakers scouted hundreds of houses in the Pacific Northwest, they finally settled on one in Garrison, New York. Known as Castle Rock, the 1881 stone mansion was built for railroad executive William Henry Osborn. A majestic house with a neglected interior, the setting works as an apt metaphor for Blake's state of mind. "That location is exactly how we found it," says Savides. "We had a set decorator, but the actual walls and the dilapidation you see in the film were exactly like that when we found the location."

In preserving the house's dingy appearance on film, Savides found he didn't need to employ many instruments in his tiny lighting package. "I used a lot of available light. Sometimes, if we were on the second floor and needed a little more light, or if we needed a room in the background to be a bit brighter, we'd place an HMI Par outside and bounce it

into the ceiling so that it would feel like natural light. But whenever I could, I used available light."

In terms of its lighting, *Last Days* bears some resemblance to Savides' last picture, *Birth*, in that the cinematographer chose to light environments rather than specific characters. "That's another mandate for me," he says. "I always prefer to light the space rather than the people who inhabit it, just like we do in real life."

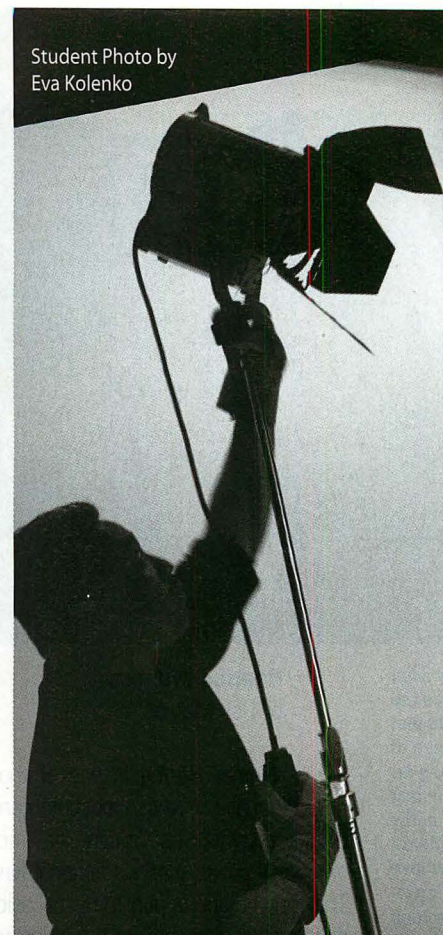
When they began planning *Last Days*, Van Sant and Savides initially had a more radical visual format in mind before they settled on 35mm. "Gus originally wanted to use tiny digital cameras and their native video," says Savides. "We actually did tests in which we shot with Sony digital cameras, downloaded the images into Final Cut Pro, and then rephotographed the images on a big Apple Cinema Display with my Arri 2-C. It looked great, but it was actually too much. There was a [visual] layer there that took you out of the movie. The viewer would have been saying, 'What am I looking at now?' and we didn't want that. So we ended up going with an approach that made the filmmaking process as simple and as easy as possible. We went full-bore into 35mm."

Savides shot *Last Days* on Kodak Vision2 Expression 500T 5229, which he chose for its "flatter and less colorful" quality. He increased contrast in post by printing on Kodak Vision Premier 2393. His cameras were an Arricam Studio and an Arricam Lite, and in keeping with the film's consistent visual aesthetic, he used just three Zeiss Superspeed lenses: a 27mm, 35mm and 75mm.

Savides says the stripping-down of filmmaking technique on these last three films with Van Sant has inspired him to approach his craft with fresh eyes. "*Gerry* was such a deconstruction and simplification of making a movie. It was literally a frame and two guys moving across it, away from it or toward it. After that experience, I started to see film in a much simpler structural way, and I think that mindset has carried through all of these movies with Gus."



Student Photo by
Eva Kolenko



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Grizzly Man examines the curious life and tragic death of grizzly-bear enthusiast Timothy Treadwell (above), whose own digital-video footage comprises much of the picture.

Below: The documentary marks the eighth collaboration between cinematographer Peter Zeitlinger (left) and director Werner Herzog.

Bearing Witness

by Ron Magid

Werner Herzog is one of those rare filmmakers whose documentaries often achieve as much or more emotional power than his fictional films. This may be due in part to his occasionally flagrant disregard for the objectivity one traditionally expects from *cinéma vérité*. Herzog recently starred in a mock documentary, *Incident at Loch Ness*, and is proud of sometimes faking shots in pursuit of a higher truth — although he describes this strategy in slightly different terms. “I would rather say that I invent, I fabricate, I stylize,” he maintains. “I do that in order to achieve something that you do not see in *cinéma vérité*: the subsurface of truth, which is more than what I sometimes call ‘the

accountant’s truth.’ I’m after something deeper — illumination, an ecstatic truth. In order to achieve that, you have to leave the mere facts behind and go straight into something that resembles poetry.”

Welcome, then, to the poetic landscapes of *Grizzly Man*, a documentary that offers a devastating take on grizzly-bear activist Timothy Treadwell, who, along with his girlfriend, Amie Huguenard, was killed and devoured by one of the very animals he loved. Treadwell’s footage, culled from more than 100 hours of video he shot during the last five of the 13 years he visited and lived with grizzlies in Alaska, forms the heart of *Grizzly Man*, but his material is augmented by an almost equal amount of interview and landscape footage shot by Austria-based cinematographer Peter Zeitlinger.

Despite Herzog’s protests to the contrary, *Grizzly Man* does its fair share of mythmaking. It’s no accident that the director chose Zeitlinger to collaborate on the film, which bears a striking resemblance to their documentary *My Best Fiend*, about Herzog’s volatile relationship with actor Klaus Kinski. Both films showcase artists living on the edge and build dramatic arcs from almost entirely found footage; both are shaped by Herzog’s voiceover narration and framed by Zeitlinger’s tellingly composed interviews; and both reflect Herzog’s identification with the creative spirit. “Let me put it in these terms: Kinski and Treadwell would have liked each other,” says Herzog. “And Treadwell and I would have liked each other if we had known each other. Everybody who knew Treadwell and knows me says, ‘You are so different, but you would have gotten along very well.’”

Zeitlinger studied cinematography and editing at the Vienna University of Art, and, at the same time, ethics at the University of Philosophy in Vienna. His numerous credits in film and television include seven other collaborations with Herzog, among them *Wheel of Time*, *Invincible* and *Wings of Hope*. Zeitlinger contends that true neutrality can never really be achieved in documentary work, and to cement his point, he quotes physicist Werner Heisenberg’s theory that it is impossible to observe even atomic particles objectively. “Any observation interferes with reality,” says the cinematographer. “Herzog [understands] this, so he does not try to be objective. But because he has his original way of seeing things, he brings more reality and truth to the screen than somebody who pretends not to interfere with reality.”

Among Herzog’s manipulations on *Grizzly Man* was asking Zeitlinger to shoot the interviewees almost exclusively in cramped spaces, which stand in sharp contrast to Treadwell’s exhilarating exteriors; observing a return by Treadwell’s loved ones to the preserve where he was killed, and filming them as they scatter his ashes; and even adding subtle camera moves to Treadwell’s



video footage when it was up-rezzed to high-definition video for eventual transfer to 35mm for theatrical presentation. Herzog notes, "I had to clip a little from the top and bottom to make [Treadwell's video] 16x9. So I had to make a choice: would I clip more from the top or the bottom? Sometimes I very imperceptibly tilted the camera when something important was at the very bottom of the frame and it shifted to the very top. The modifications are very slight, but I think they were what Treadwell would have done himself."

Treadwell's original video footage, shot with a one-chip digital camera, is beautiful. Perhaps his greatest accomplishment is not the intimate footage of his grizzly companions, but a sequence that begins with paws playfully clawing at the roof of his tent. The sequence continues outside, as Treadwell discovers twin foxes scampering around his campsite and follows them into the wild. Herzog made Treadwell's footage the centerpiece of *Grizzly Man*, despite the indifference of some colleagues. "Nobody saw the quality of this footage," he maintains. "It was dismissed by everybody. I had to sift through 100 or so hours of footage very quickly. Four people helped me, and I gave them precise instructions. I was looking over their shoulders and watched 20 hours or so myself, yet everybody overlooked the fox sequence, and it ended up in the garbage. I sensed there was something there, though, and saved a little piece of it. I [eventually] fished it all out of the garbage."

Zeitlinger shot the contemporary portion of *Grizzly Man* on Super 16mm. "I'm a man of celluloid," notes Herzog. "If it had been feasible out there in the wilderness, I would have shot 35mm." Says Zeitlinger, "We had a small documentary equipment kit like those used by TV-news crews. We used an Aaton LTR, but I didn't use its original ergonomic handgrip; I used a special construction where the handgrip was turned approximately 30 degrees to the right, and an extension brought it to the center of gravity, so the camera was supported by [my right] hand."

To film interiors, Zeitlinger used two Zeiss Distagon T1.2 lenses, a 9.5mm and a 12mm. "Outside, I used a Canon 8-64mm [T2.4] zoom, but to be flexible and fast I used it as a prime, maintaining approximately the same focal length during a shot instead of zooming."

It was Zeitlinger's handheld virtuosity in a documentary by Ulrich Seidl that first brought the cinematographer to Herzog's attention. "Werner liked my way [of moving] the handheld camera and my athletic condition more than my lighting," admits Zeitlinger, who adds that Herzog's opinion of his lighting has improved over the 10 years they've been working together. "I always try to imitate existing light, with its shadows and different levels. Usually we use no additional lamps for the scenery and wide-angle lenses. The wide-angle lens suggests an objective view of the world, because the eyes of the audience are free to find their own [focus] on the screen. Werner and I have found a way to work together without talking much — sometimes he grabs my belt and leads me to the right point of view, or he holds me above an abyss or in a helicopter while I am filming. He trusts in the magic moment of the truth, and so do I. The right moment can't be repeated if you miss it."

In *Grizzly Man*, the duo captured some exceptional "right moments": Treadwell's parents posed outside their home to mimic Grant Wood's *American Gothic*; a grizzly-bear expert in his expressively decorated office; and Treadwell's former girlfriend watching Herzog listen to the audiotaped deaths of Treadwell and Huguenard.

During Herzog's interview with Treadwell's parents, Treadwell's mother clutches a stuffed bear that was one of her son's favorite playthings. "Werner is very good at talking to people, hypnotizing them so nobody becomes aware of me," notes Zeitlinger. "That is the best moment to prepare the next shot. I tried to find the framing and perspective [that conveyed] their character. What is better than surroundings created by the people themselves?"

This logic certainly applied to the

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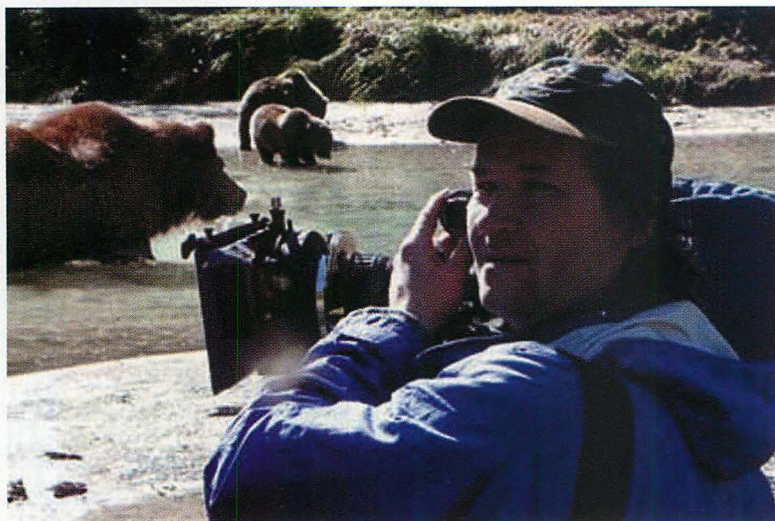
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Zeitlinger gets close to the action on location in Alaska.



bear expert in his cramped office, which is adorned with a huge grizzly skull and a bumper sticker reading "Maul 'em and smile." The static shot of the expert's natural habitat, which Herzog admits to recomposing for dramatic effect, forces the audience to contemplate the power of that skull. "One should not forget that a bear weighs up to 1,400 pounds and

can run as fast as a racehorse," says Herzog. "A bear can drag a fully grown moose up a steep mountain slope, and he can decapitate you with a single swipe of his paw."

Treadwell and Huguenard's deaths were not so swift. One of *Grizzly Man's* most affecting scenes shows Herzog listening to the audiotape of their

deaths (Treadwell hit "record" when the bear entered their tent) as Jewel Talibek, Treadwell's former girlfriend, looks on. The sequence is the only time we see Herzog on camera, but only from the back; the focus is on Palovak. Zeitlinger says the moment was "a very delicate situation. Jewel had not listened to the tape, and it took a lot of trust and conviction for her to let us into her house to film that scene. There was no reason to show Werner's face, because the story is not about Werner's emotions. It's about the fact that this horrible event was recorded." Herzog adds, "The really interesting thing is Jewel reading my face in almost mirror image. It was much more important to see her anguish watching me, because she had not listened to the tape. I'm very present [throughout the film], but it was right that I [remained in] the background that time."

Zeitlinger did the same. Despite the fact that almost half of *Grizzly Man's* footage was shot by him, the focus

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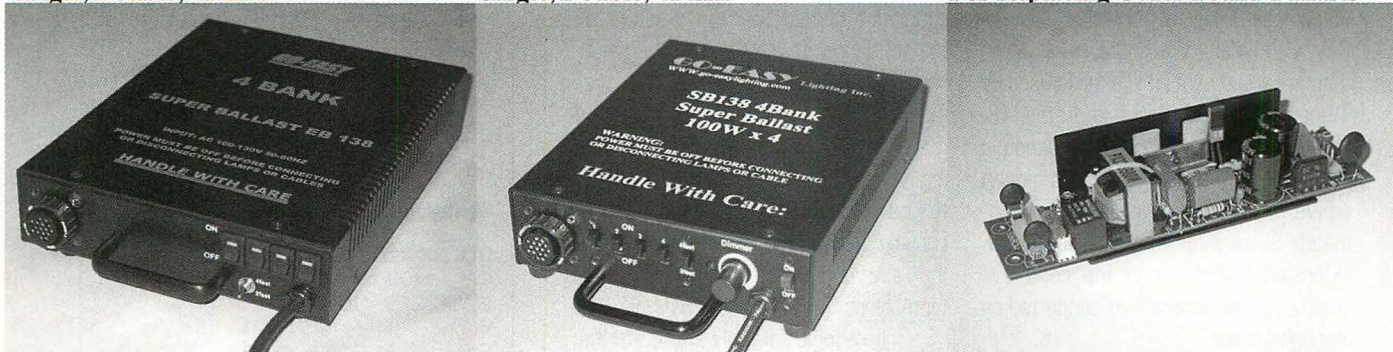
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remains on Treadwell and the footage he captured. "Treadwell's original material is [the most] impressive," says the cinematographer. "The power of reality, authenticity and naiveté is the strongest we are looking for in filmmaking. You can never achieve that kind of feeling by any fiction."

Nevertheless, over the course of the picture, Treadwell emerges as one of Herzog's "holy fools," passionate about ideas that seem to be wrong. But the director is quick to deny this perception: "A life intensely lived like that is never wrong. Timothy had his substance, his dignity, his ecstasies and his demons. That's what made him so fully human. This isn't a film about wild nature, it's a film about human nature."

Throughout the film, Herzog questions Treadwell's oft-stated desire to attain some sort of salvation through bonding with grizzly bears. But, the director insists, "I do not dismiss it. Not everything Treadwell did out there is 100 percent acceptable, and I differ with

him. That ongoing argument, sometimes silent, sometimes outspoken, makes the film much more rich. I think he was too much into his own romanticized view of nature. If he had not died, this story probably would have been more about a Prince Valiant who was out there fighting the bad guys who tried to kill the bears. It has to do with our civilization's attitude toward wild nature, what I call the 'Disney-fication' or the sentimentalized aspects of wild nature."

As depicted in *Grizzly Man*, Treadwell personifies these qualities. Herzog refutes Treadwell's sentimentalized view of the grizzlies in language that eerily parallels his own "jungle murder" speech from *Burden of Dreams*. But Herzog says what emerges from this debate in *Grizzly Man* is the admiration of one artist for another. "I disagree with Treadwell, but I give him credit as a professional, as a great filmmaker. He produced footage that I think will never be repeated. Not even with many millions of dollars from a Hollywood

studio would you be able to achieve footage of that caliber. His footage has unprecedented, unspeakable beauty." ■

ERRATA

Because of an editing error, our July DVD review of *Heat* (page 22) incorrectly stated that the picture was shot in Super 35mm. It was shot in anamorphic 2.40:1. AC regrets the mistake.

Also, some readers noticed that the Kodak "On Film" advertisement on July's back cover erroneously listed the credits of Mark Irwin, ASC, CSC alongside a photo of and statement by Tonino Delli Colli, AIC. Irwin's credits were mistakenly inserted by the ad agency. AC is not responsible for the accuracy of advertising content, but we regret that this error appeared in our pages. ■



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Paradise Lost

Mauro Fiore, ASC aims his lens at
The Island, an action-driven sci-fi adventure.

by Jon Silberg

Unit photography by Merrick Morton, SMPSP and Doug Hyun

Something is definitely not right in Centerville, and Lincoln Six-Echo intends to find out what it is. In the futuristic thriller *The Island*, shot by Mauro Fiore, ASC and directed by Michael Bay, people like Lincoln (Ewan McGregor) and the lovely Jordan Two-Delta (Scarlett Johansson) exist

in a massive laboratory that is sealed off from the rest of the world, ostensibly to protect its inhabitants from widespread contamination that followed an apocalyptic disaster. All they see of the outside world is represented in beautiful holographic images of the last inhabitable corner of the earth: the lush island to which

the lucky winners of an ongoing lottery go to live out their days.

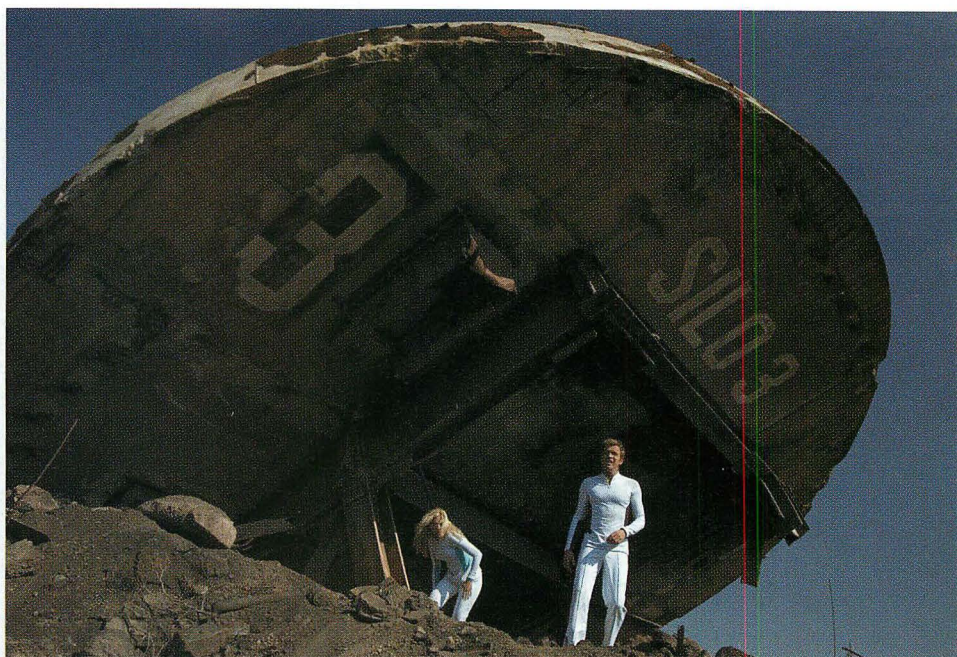
But Lincoln discovers that all of this is a lie. In fact, he and the other inhabitants of Centerville are actually clones — known as “products” or “agnates” — cultivated by the nefarious Dr. Merrick (Sean Bean) for the sole purpose of provid-

ing spare organs (and an occasional baby) for humans in the outside world. The “winners” of the island lottery are not taken to a tropical paradise, but instead are simply transported to another area of the lab, where doctors kill them by lethal injection and harvest their organs. In the first act of *The Island*, Lincoln and Jordan manage to flee, but they are vigorously pursued by Merrick and his many associates.

Fiore has shot big-budget action projects before, among them *Tears of the Sun* and *Driven*, but he knew from his experiences shooting second unit on Bay's *Armageddon* and *The Rock* that his first outing as director of photography for Bay would be particularly challenging. Bay, he submits, “is a very strong visual director who has a unique way of working.”

As is frequently the case on today's large-scale Hollywood productions, there was a very short window between *The Island*'s “green light” and the day cameras had to roll, which meant Bay and his team had very little time for preproduction. The director and a storyboard artist created very rough boards and animatics, but Bay intended to make most key decisions on the day. “We were running against it on this movie,” acknowledges the director. “It was slightly under-prepped, because what's going on in Hollywood now is that you have to prep a budget, rather than prepping a show. If a budget goes a little beyond where they want it to be, they'll just pull the plug.”

“Not much was planned before we started shooting,” says Fiore. “You would think that on a film like this, everything would be plotted beforehand and everyone would have figured the whole movie out before we got there to shoot. Instead, we really had to rely on our instincts. It was a pretty interesting approach to improvise on a film like this.”



Even the visual-effects team worked that way. “We never sat down and discussed an overall philosophy,” says Industrial Light & Magic's Eric Brevig, who served as the show's visual-effects supervisor. “[Our approach] evolved throughout the shooting. We were dealing with six to 12 cameras sometimes, and we'd have 30 seconds' notice when we found out how something would be staged. We were definitely running and gunning. Even though we had Super Technocranes and Strata Cranes and other big equipment, it was a guerrilla shoot; you might literally have five minutes' notice to move four camera setups two blocks

because the sun had just come out from behind a cloud. It's certainly one way to make the filmmaking process exciting.”

Fortunately, the schedule was structured so that the big studio setpieces featured in the first part of the picture could be shot during the latter half of production. This enabled Fiore, production designer Nigel Phelps and gaffer Michael Bauman to conceptualize the biggest sets as principal photography of the exteriors got underway.

Fiore explains that his overall plan for *The Island* was to sharply delineate between the look and feel of Centerville and that of the outside

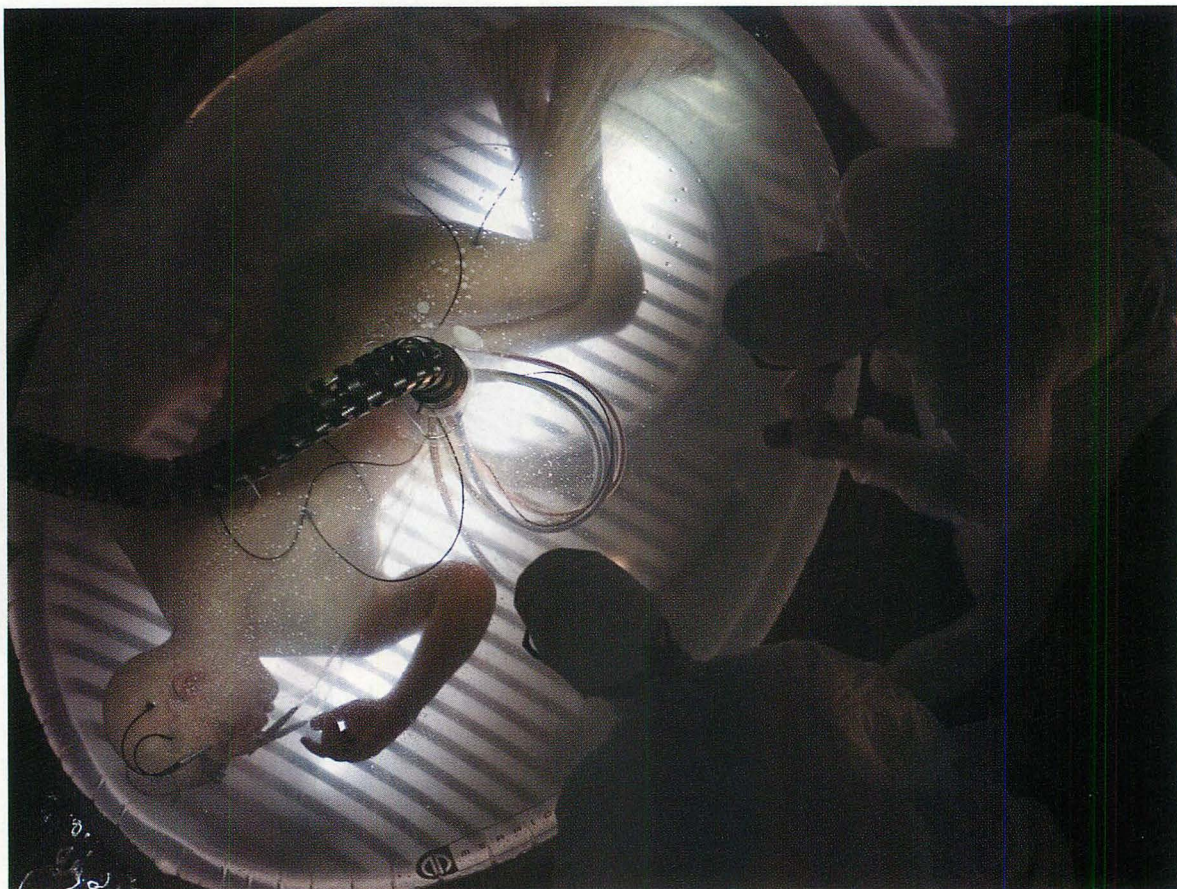
Opposite: In the ultra-stylish Stim Bar, Lincoln Six-Echo (Ewan McGregor) chats with Jordan Two-Delta (Scarlett Johansson). **This page, top:** Lincoln and Jordan discover the “real world” above the containment facility. **Bottom:** A group of “agnates,” or clones, stumble down a cinder cone.



Paradise Lost

Right: The pre-birth agnates lie in state in the Incubation Silo.

Below: An overhead view of the Incubation Silo reveals the scale of the set.



world. Inside, the lighting would be antiseptic, inorganic and cold, whereas the look of the outside world — especially when Lincoln and Jordan first discover that it is actually inhabitable — would be motivated by warm, hard sunlight

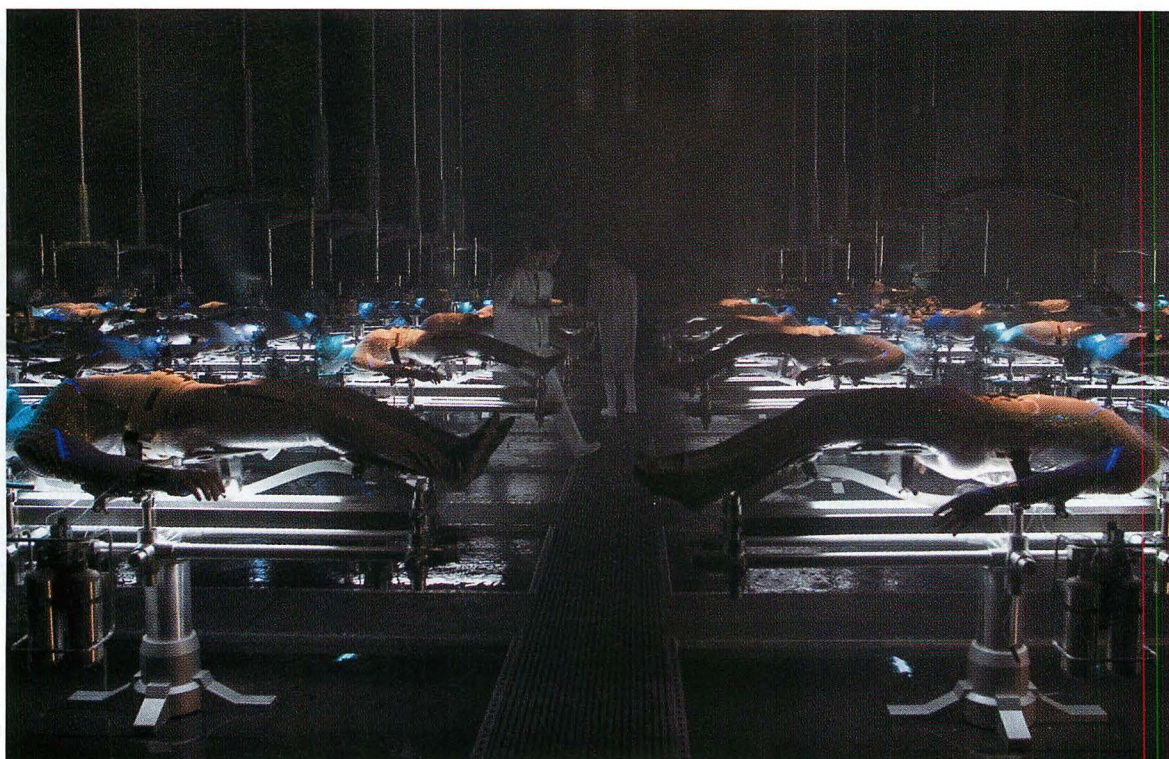
that would come as a shock to the clones. "When the characters made it to the outside world, we wanted the color to be very saturated," says the cinematographer. "We wanted the sky to be overwhelming, almost hyper-real. It's the first time Lincoln

and Jordan have ever been out in the open air and affected by the wind and the sun. It's almost a dream-scape. As the story progresses and they get more accustomed to the outside world, the look becomes a little more intense, but it is always different from the look inside the institute."

The contrast between the sedate, confining world of the institute and the subsequent chase through a futuristic Southern California was underscored by camera movement. Scenes in Centerville were covered by cameras mounted on remote heads, dollies and cranes, whereas the majority of "real world" scenes were shot with handheld cameras. Fiore's main cameras were Panaflex Platinums, and he always had Panavised Arri 435s on hand in case high-speed work was requested.

The new Arriflex 235 turned out to be the go-to camera for a lot of





Left: Suspended agnate bodies are implanted with long-term memories in the Foundation Room. In the set's ceiling, 80 Source Four Lekos with 5-degree barrels were aimed straight down at the clones. Below: Director of photography Mauro Fiore, ASC takes a light reading in the Foundation Room set. Suspended above the clone's faceplate is one of the 12"-long LED lighting panels provided to the production by Color Kinetics.

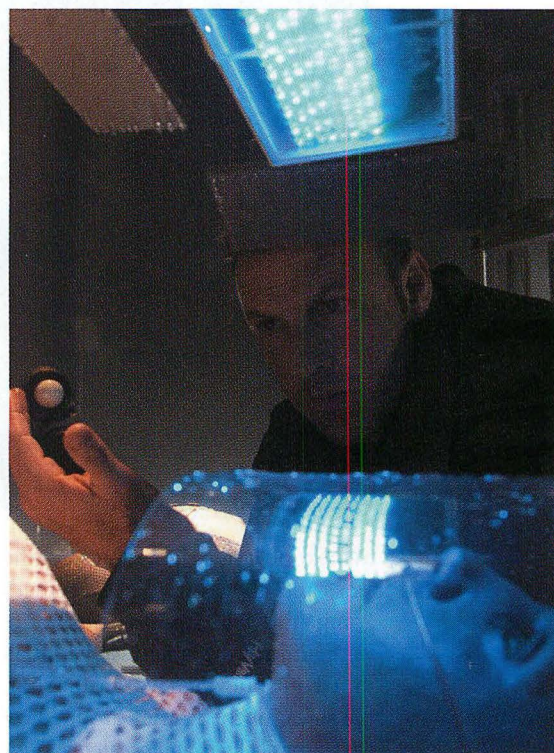
The Island's action sequences. "On every film, you go in with preconceived notions about what it's going to be, and then along the way it takes on a life of its own," observes Fiore. "The same is true for the tools you use. You might go into a production with all types of equipment that you might possibly use, but when you're feeling things out during the first few weeks of production, something might take precedence that you never expected. On *The Island*, it was the Arri 235."

Bay purchased a 235 directly from Arri before the new camera had even shipped, and he says its attributes quickly became clear on the set. "I can't say enough great stuff about that camera," says the director. "I swear we shot a third of the movie on it. It's so lightweight, and we invented special motorcycle-style handles for it. You can't whip any Panavision camera around fast and be controlled enough to do some of the shots we did on this movie, even if you use a Millennium. The 235 is even quiet enough doing action scenes to record dialogue."

The production used a range of Primo anamorphic primes, and at Bay's request, Panavision also created an Angenieux 24-240mm anamorphic zoom and special adapters that would convert spherical 21mm and 17.5mm close-focus lenses into anamorphic lenses. "I've always felt anamorphic is not good for shooting inserts — when you want to get right in on something, you have to step back and use a long lens, and the result can be very flat and boring," says Bay. "With these adapters, we could focus about 2 inches from the lens, and that helped give the inserts a little style."

For some unusual shots during surgery scenes, the filmmakers used the Kenworthy Snorkel Lens System and the Frazier Lens, but Bay notes the results yielded by the latter were disappointing. "The Frazier Lens in the anamorphic format was a big problem," he says. "We found that the f-stop they rate it at wasn't accurate. We used it on some very complicated shots. For instance, I had the crew practice for a full day for a surgery scene where the camera

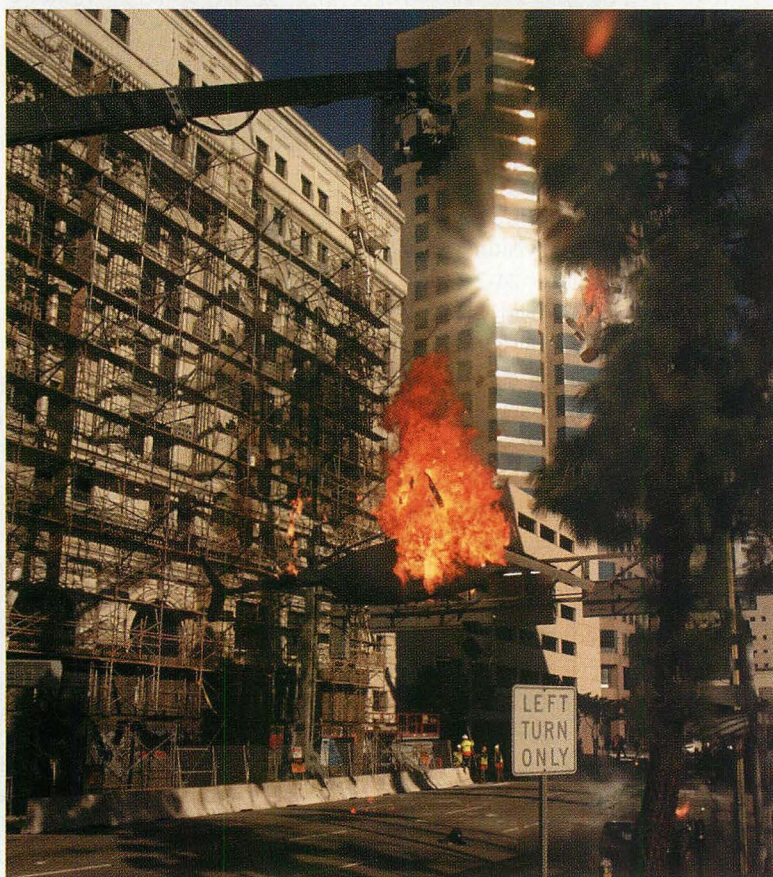
goes in close and pulls away as Starkweather [Michael Clarke Duncan] is being operated on by remote robotic arms. The shots start out coming through a light from 15 feet up, then it passes close



Paradise Lost



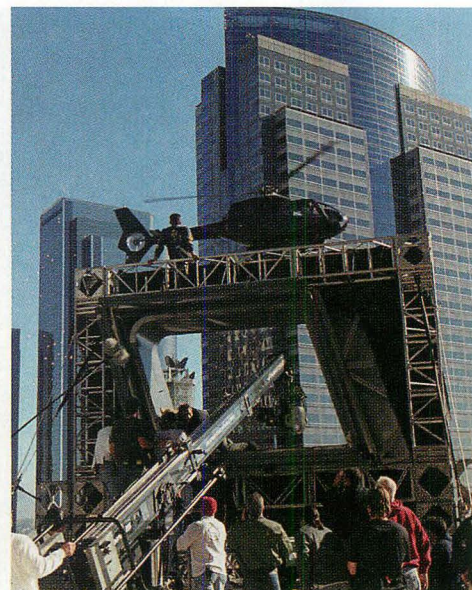
Clockwise from top: Lincoln and Jordan land in the netting of a tall building; the crew uses a Technocrane to capture a shot of the "Whisper" helicopter in downtown Los Angeles; the flaming Whisper crashes to the ground.



to the tools going right in front of the lens, and then on to a saw that's going into his chest. The robotics were difficult to rig and we had it all timed out, but when we saw the shot, the sides [of the frame] dropped off so dramatically that it created a lot of

grain. Fortunately, ILM has a process that fills in parts of a shot that have excessive grain. It saved the shot."

Fiore and Bauman worked to light the massive spaces inside the institute in ways that would be suitably institutional, yet also visually



interesting. "This whole job was about experimenting with alternative light sources," notes Bauman. All of the institute sets were built at Downey Studios, a Southern California production facility that formerly housed Boeing aircraft. The spacious stages were needed to show large masses of "products," or clones, marching through their dull lives.

When clones are created, they are sent to the creepy Foundation Room to be programmed. A sequence in *The Island* depicts 80 newly formed clones lying in a state of suspended animation as their minds are programmed with off-the-shelf life stories; this is accomplished with a constant stream of images sent over small screens positioned in front of their faces. "That was a wild set," recalls Bauman. "It had 80 tables, and each table had four lights. We also had to create a flickery sort of television light on the clones' faces. Michael wanted to be able to shoot in any direction as quickly as possible, so the first concept for lighting it went through the roof in terms of cost. We considered running a bunch of real monitors to the tables, but then water got added to the mix."

The water effect was generated by overhead sprinklers that were

ostensibly used to keep the clones' skin moist and supple. In practical filmmaking terms, the sprinklers helped give the scene atmosphere, but they also created some serious logistical problems. "Water changes everything," explains Bauman. "Of course, everything has to be completely watertight. And if Mike says you're going to have a little water, you'd better prepare for a *lot* of water!"

Bauman's crew positioned two HydroFlex HydroFlo underwater fluorescent tubes under each table; these units illuminated the lower half of the clone's body and the ground beneath the table. In the set's ceiling, 80 Source Four Lekos with 5-degree barrels were aimed straight down at the clones. With the addition of rain and smoke, the Source Fours helped create the effect of 80 shafts of light, leading viewers' eyes to the tables.

To achieve the flickering effect created by the monitors, Fiore and Bauman turned to LED panels, which have become popular for stage and fixed-display work. The units consume little power and generate no heat, and some can be adjusted through a dimmer board to emit different colors or intensities — perfect for creating a flicker effect. The filmmakers used 12"-long panels from Color Kinetics, and Bauman says they provided more than enough light when wrapped snugly in Ziploc bags and placed 1' away from the actors' faces. "To generate the flicker effect, we worked mostly in the blue spectrum, and the dimmer-board operator worked out an algorithm mixing the different color channels," the gaffer explains. "We built eight different flicker gags and then assigned them to different areas of the set."

LED panels also provided the solution for another scene, which features mechanical arms that emit a thin wall of light that appears to be created by lasers. "They wanted to



In another elaborate stunt sequence, doubles for McGregor and Johansson, suspended from safety wires, fall onto a building's giant "R" logo.



Paradise Lost



Top: The crew captures a bluescreen shot of Lincoln and Jordan riding a vehicle known as the "Wasp."

Middle: The stars take their turn on the Wasp while filming at the Terminal Island Freeway in San Pedro. **Bottom:** A sunset shot of Detroit, doubling as Los Angeles.



have a very hot, thin sheet of light coming out of the arm and covering the bodies strewn around it," says Bauman. "We asked Light Panels to design very narrow 6-degree LEDs. Each was 1 watt, which is pretty bright for LEDs, and we lined up 200 of them inside each mechanical arm. That created a line of light that could just swing around the set."

To light the institute's massive common spaces, Fiore's crew placed a great many Par cans and Source Four Lekos softened with diffusion above the set, and they also asked the art department to build a large number of Kino Flo tubes into the set design. "At one point, the guys from Kino Flo called and asked, 'What the hell are you guys doing down there?'" Bauman recalls with a laugh. "At the beginning of the shoot, we'd purchased a big Kino package because it made more sense than renting one. We had about 300 Image 80s, which on a large movie isn't that big a deal, but what we were *really* consuming was individual fixtures. We had more than a thousand Kino Flo tubes built into one set, the Department of Operations. It's full of underlit tables, underlit floors, backlit glass panels, and just a ton of other surfaces that had to look lit from within."

In the Department of Operations, clones like Lincoln spend their days filling tubes with odd-looking fluids, which are then sucked up through a series of clear pipes to the Foundation Room, where the newest clones are nourished by the formula as their minds are programmed. In determining how to light the fluids going through those clear pipes, Fiore's crew experimented with Electric Tape from the Talking Laser Company. Bauman explains, "It looks like a roll of tape, but when you attach the tape to a transformer, it glows different colors. We could put that on materials that were impossible to backlight, like those pipes. When the material flows

by, it creates separation and [the illusion of] backlight.”

Fiore shot Centerville sequences on Kodak Vision2 500T 5218, and he filmed the outside world on Kodak’s more contrasty Vision 250D 5246. When working outside, his crew frequently shaped natural sunlight with bounce cards and augmented it with HMIs. “On the first day of shooting, we filmed the scene where Lincoln and Jordan first experience daylight,” recalls Fiore. “We were fortunate enough when we were out there to get cobalt blue skies and amazing cloud cover. When the location looks that good, you don’t have to do too much to it.”

When there wasn’t so much strong sunlight to work with, Fiore bounced 12K Pars into 12-by Ultrabounce and put that light through additional diffusion. The cinematographer uses HMIs sparingly; he prefers the look of uncorrected tungsten light bathing scenes in sunset-like warmth. “HMI light never really feels like the color of the sun,” says Fiore. “We frequently used Dinos with spot globes. That extra orange of the tungsten gives you some extra punch and feels a bit more like sunlight, so we left them uncorrected.”

One of the largest interiors set outside of Centerville is an abandoned industrial space where Lincoln has an inevitable confrontation with his human counterpart, the man from whom he was cloned. Though set in the Los Angeles of the future, the scene was shot in a century-old train station in Detroit, Michigan, that features arched windows and large panes of glass. Fiore’s team searched out the biggest units they could find to light through the windows. “If there are windows to work with, I generally don’t put that much light inside sets,” says Fiore. “I don’t work from a truss much. So we tried to get the biggest tungsten lights we could find.”

The crew brought in two



Top: A look at the overhead lighting in the Central Atrium set. **Bottom:** The agnate crowd applauds as their population is cleansed.

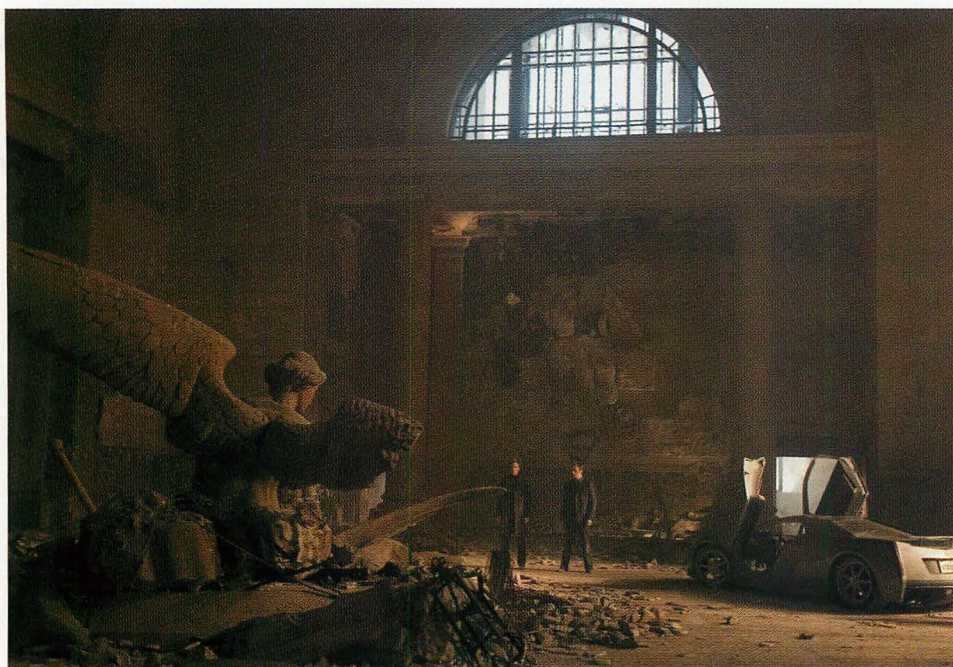


Lightcrane trucks, each of which held four 36-bulb Dinos. These units, as well as eight other Dinos, were set up to push through the train station’s large windows and provide a 100’-long line of light. “The windows were dirty, and that helped give the light a kind of pattern,” recalls Bauman. “We also blew some smoke

in there. We created hot kicks with 12-light Maxi-Brutes with spot globes that we moved around for each setup.”

At press time, *The Island* was scheduled to go through a digital intermediate (DI) at Company 3, but Fiore and Bay are strong believers in getting as much of a

Paradise Lost



In a clone/sponsor standoff staged within Detroit's abandoned Michigan Central Station, the real Tom Lincoln meets his clone.

film's look as possible in the original negative. Bay insisted on shooting *The Island* in anamorphic 2.40:1 because he was dissatisfied with the

look of *Bad Boys 2*, which originated on Super 35mm and was converted to anamorphic in a DI. The director maintains that the DI is most useful when it's used to achieve what can't be achieved photochemically: "In *The Island*, we've got dream sequences that we were able to really twist and defocus and just wack out [digitally]. You just can't do that kind of thing any other way."

Like many cinematographers, Fiore says the DI presents a number of pros and cons. On *The Island*, the chief con was that he had to view digital dailies throughout the shoot. All of the 35mm footage was processed at Technicolor in Burbank and then sent to Company 3, where it was telecined to high-definition (HD) video. Fiore watched projected HD dailies in a trailer at the end of each day, while Bay and others viewed down-converted DVD versions of the dailies. Fiore says the

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setup eliminated two aspects of the dailies process that he finds valuable: first, he had no concrete timing report that would tell him exactly where his negative was falling each day; and second, there was no time when he, Bay and the rest of the crew watched dailies together and discussed specifics.

"I think there are some cons to digital dailies right now," says Fiore. "It's great to be able to color-correct dailies, but you can't get something so basic as timing numbers. The tendency throughout the whole film, I feel, is that the work suffers. Every interpretation is made according to those HD images, and they have nothing to do with what's on the negative. You can manipulate color and exposure for that neg once you transfer to HD, but you never know what you've really got in the negative. Plus, I was looking at HD and everyone else was looking at

DVDs. Michael and I never watched anything together, and those conversations between a director and cinematographer can be valuable."

There was also the challenge of communicating the filmmakers' intentions to the telecine colorist. Throughout the shoot, Fiore had an assistant use a Nikon D70 to shoot stills in the Fine/JPEG mode and manipulate them in Photoshop to approximate the look he and Bay wanted. Hard copies of the stills were then printed out and sent to Company 3 along with the negative. "At least with a digital print, you can have a more objective reference," notes Fiore.

Fiore went into *The Island* expecting that Bay would challenge him every minute of every day, and he says he got what he expected. "With Michael, there's a lot of improvisation involved. It's a matter of having the gear and the

manpower to be able to fulfill his whims. It can be difficult, but it's also a fresh approach to filmmaking — nothing is ever stale. There can come a point on a film when ideas are overanalyzed and you're no longer working from an emotional response. That never happened on *The Island*." ■

TECHNICAL SPECS

Anamorphic 2.40:1

Panaflex Platinum;
Arriflex 235; Arri 435

Primo, Angenieux, Kenworthy
and Frazier lenses

Kodak Vision2 500T 5218,
Vision 250D 5246

Digital Intermediate

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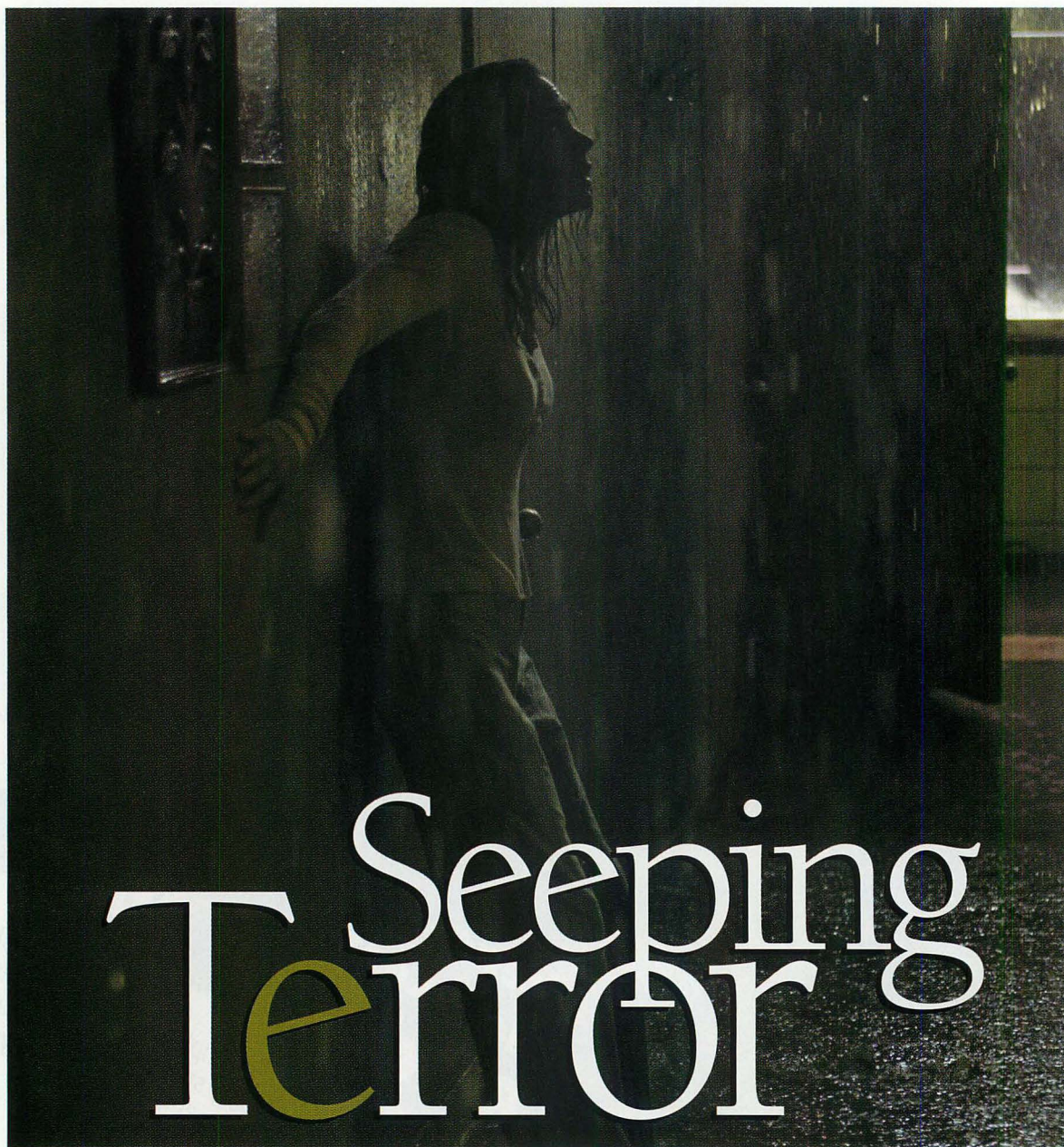


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Director of photography
Affonso Beato, ASC,
ABC taps psychological
dread for *Dark Water*.

by John Calhoun

Unit photography by Rafy

The title of the thriller *Dark Water* holds the key to its prevailing look, which is cloudy and wet. Adapted by screenwriter Rafael Yglesias from a 2002 Japanese film by Hideo Nakata (*Ringu*), *Dark Water*, directed by Walter Salles, mines the horror genre's subtler vein. The plot centers on Dahlia Williams (Jennifer Connelly), a recently separated woman who moves with her 6-year-old daughter (Ariel Gade) to an apartment on Roosevelt Island, in the middle of

New York's East River. Soon, she realizes all is not well in her new home, or, specifically, in the empty apartment above — in addition to the requisite mysterious bumps in the night, black water stains begin appearing on Dahlia's bedroom ceiling. The dark doings could be the work of the building's managing agent (John C. Reilly), or the creepy super (Pete Postlethwaite), or Dahlia's estranged husband (Dougray Scott), who is battling her for custody of their child. But

increasingly, the source appears to be supernatural — or, just maybe, a figment of Dahlia's imagination.

Dark Water was shot by Affonso Beato, ASC, ABC and directed by Walter Salles, Brazilian compatriots who had worked together on a number of documentaries and commercials but had not collaborated on a feature. "We had a mutual understanding that stemmed from our previous experiences," says Salles (*Central Station*, *The Motorcycle Diaries*). "But I was also eager to work with Affonso on a fiction film because I love one of his very early works, Glauber Rocha's *Antonio das Mortes*."

Rocha's 1969 movie was part of the period's Cinema Novo movement, a Brazilian equivalent to the Nouvelle Vague that Beato immersed himself in during the formative years of his career. "I had the privilege to work with the incredible Argentinean cameraman Ricardo Aronovich, who shot maybe five films in Brazil, and then I shot my first feature at the age of 23," says the cinematographer, who is currently president of the ABC (Associação Brasileira de Cinematografia). Beato moved to the United States in 1970 and continued to shoot projects in other countries. (His first U.S. credit was 1978's *The Boss's Son*.) Among his credits are *The Big Easy*, *Ghost World*, and three collaborations with Spanish filmmaker Pedro Almodóvar, *The Flower of My Secret* (*La Flor di mi secreto*), *Live Flesh* (*Carne trémula*) and the Oscar-winning *All About My Mother* (*Todo sobre mi madre*).

But it was *Antonio das Mortes* that left the most lasting impression on Salles. "It's one of the most beautiful works of cinematography to come out of Brazil," says Salles. "The Brazilian palette is beautifully rendered, and I also think the way Affonso captured the human geography is staggering." Human geogra-

phy is an important element in *Dark Water*, he adds. "The film is about the ghosts that we carry within, the ones that inhabit our past. It's also about abandonment and urban solitude. The [visual] grammar we used had to serve this core."

The story's isolated setting became a crucial visual motif, as did the steady rain. "The main story takes place during 10 days in the life of this woman, and it rains in almost every scene," says Beato. "I also saw that 75 percent of the scenes would be filmed in Toronto on stage." That percentage, he explains, comprised sequences that would take place either in Dahlia's apartment or in other spaces in her apartment building. Because the interiors were filmed before the location work in New York, the filmmakers set the weather patterns they wanted on stage and then tried to shoot exteriors on appropriately rainy days — though they had little cooperation from Mother Nature.

Salles was adamant about keeping the picture within a naturalistic visual framework, but as Beato points out, that framework had a lot of leeway. "When everything is gray and bad weather, [the look] is pretty gritty," says the cinematographer. "It's what we call the graphical envelope. There is a proximity with reality, but there's a little graphic twist that says you're in a special place and situation." Salles adds, "We tried to insert the characters in a setting that was as real as possible, but at the same time, we tried to abandon the limits of rationality, to accept the fact that there is a territory beyond that which we can make sense of — the territory of the repressed or the unconscious."

The visual balance between reality and imagination was struck in a number of ways. Working with production designer Therese DePrez, Beato devised a controlled color palette for the film. "Lucian Freud, the German painter, was our



main reference," he says. "He gave us the palette we wanted, which was ochers, greens and blues." While scouting in New York during pre-production, Beato shot some footage that hewed to these muted, even harsh color values, complementing them with "pings" of red in the background. In the finished film, the results of this scheme can be seen in the apartment's corridors. "They are all green and blue, but then you see an exit sign that creates harmony and balance," says Beato. "Otherwise, the look would have become flat and boring."

During prep, Beato, Salles and gaffer Morris Flam scouted and shot some tests on Roosevelt Island, the former site of a penitentiary and smallpox hospital where residential housing complexes were built in the 1970s. "Roosevelt Island is one of our central characters," says Salles. "Visiting it for the first time was one of the factors that made me decide I wanted to do the film. It's a stark, harsh location, and the repetitive architecture of the buildings reflects the feeling of the heroine getting lost in the geography [and experiencing] a sense of estrangement."

Investigating the island's predominant light sources, the filmmakers found mercury-vapor, sodium-vapor and fluorescent fixtures, "all of the ugliest lights you can have in contemporary society," says Flam. "But we live with those lights all the

Opposite: After venturing upstairs to the abandoned apartment above her own, Dahlia (Jennifer Connelly) finds herself in a surreal downpour of dirty water — which may or may not be real. **This page:** The landlord, Mr. Murray (John C. Reilly), assures Dahlia and her daughter, Ceci (Ariel Gade), that the run-down complex is nicer than it looks.

Seeping Terror

Right: The building's surly super, Veeck (Pete Postlethwaite), reluctantly examines a sodden patch of ceiling that has captivated Ceci (below).



time, especially in a place that's sort of industrial or institutional. It's not an appealing, warm or friendly type of light, but we went for that look because that's what *Dark Water* is basically about: it's creepy and atmospheric." Beato adds, "When you have a cloudy day or a dark day, those lights take over the place, so we started to talk about using them as keylights. That modern light actually helped us get the look we wanted."

Salles also envisioned a high-contrast look to reflect the main character's "increasing loss of reality." It was therefore decided that *Dark Water* would be processed using Deluxe Laboratories' Adjustable Contrast Enhancement (ACE) silver-retention process.

Compared to similar processes, ACE has the advantage of greater scalability, meaning that there are more options as far as the degree of silver retention. "There are labs where you can go only 100 percent, and sometimes that's not what you want," says Beato. "To me, a 100-percent bleach bypass is such a visual statement that it pushes you away from reality." A 35-percent application of ACE was applied to most of *Dark Water*, although some flashback sequences and a few hallucinatory moments were given a stronger boost in contrast. Beato applied the ACE process to his early scouting footage, but he then ran into a problem: "The studios don't allow you to do any kind of special processing on your origi-

nal [negative]. I therefore went to the lab and did tests, and I reached the conclusion that we could do the process at the interpositive/internegative stage, which also gave me more flexibility to change [the level of ACE]. I also researched a way to simulate on the work prints more or less what we were going to get."

During prep in Toronto, additional camera tests were conducted over a period of several weeks on a mockup of the apartment set that included a TransLite depicting the Queensborough Bridge and Manhattan skyline. These tests formed the basis of Beato's "formulas" for shooting and for achieving an approximation in dailies of what the film would look like after ACE was applied. "You have to have controls, because ACE really shifts colors," he notes. "Everything in the tests was printed in two ways: normally, and with a green/yellow color shift in terms of RGB numbers, which would be a simulation of the process. We would document the lighting and the filters we were using in the camera setup, and the lab would follow our instructions. That became the formula for the look, and I applied these formulas on the stage. As a result, we had great dailies."





Left: Dahlia's contentious separation from her husband, Kyle (Dougray Scott), adds to her tension. **Below:** As Dahlia's personal problems mount, her visions of water grow more intense and disturbing.

During the tests, Beato made limited use of the Kodak Look Management System (KLMS), which had just been introduced at the time. "Eastman loaned me all of the equipment, including a Canon digital camera and a little Kodak printer," he says. For comparison purposes, he adds, "I would try to achieve my look with Photoshop. I would do the same thing with KLMS, and it was incredible, because I could not get [with Photoshop] the film look that KLMS gives you. I really trust that this is the future for communication between cinematographers and labs."

The tests also allowed Beato and Flam the opportunity to see how the mercury- and sodium-vapor sources they wanted to use would come across on film, and how they would blend with tungsten sources. The process was particularly helpful in determining values in scenes such as one that finds Dahlia in the basement of her apartment building; at one point, she moves to an area that is lit only by a blue "bug light." Beato details, "We needed to see how that blue would behave in the ACE process. Also, there are moments when Dahlia goes into silhouette that needed to

be controlled, because there is a big difference between being underexposed and underlit. When you go through ACE and increase the contrast, you've got to be careful about your exposure. Otherwise, you can lose information in the shadows. We did these tests to gauge the realities we were going up against, so we could take creative risks but at the same time be responsible. The test results became a sort of operating manual for Mo and the electricians so we wouldn't be inventing things on the spot."

Some of Beato's fears about what the ACE process would do to



Seeping Terror

Right: Cinematographer Affonso Beato, ASC, ABC and director Walter Salles used eerie lighting and high contrast (partially achieved with Deluxe's ACE silver-retention process) to create a disturbing ambience.



the images failed to materialize. "You have this prejudice that if you increase contrast you'll lose detail, so the tendency is to overlight and then bring it down," he says. "What we found is that when we're using this process carefully, if the character goes into shadow, you actually have more definition and more separation than you normally would." It certainly helped that Beato had decided to shoot the entire picture on Kodak Vision2 500T 5218. "It's a fabulous product that sees four to five stops down on skin tones," says the cinematographer. "We did tests pushing it one stop, but I eventually gave that up [except in flashback scenes, where the goal was a heavier look]. 5218 has such a fine grain, such definition, that it would have been a crime to change emulsions. I don't like to increase the complexity of my communications with the lab."

For daylight scenes, "you need to know how to adapt, because if you put a density filter in front of the lens you don't see anything in the viewfinder. The Panavision cameras have a little slot so you can put the filter behind the lens and work comfortably with your f-stop. These are

all things you have to take into consideration; it was a complex process." Beato's camera package comprised Panaflex Millenniums (for ease of transition from studio mode to handheld or Steadicam) and Panavision Gold IIs. "We never shot the same scene with two cameras, but we sometimes leapfrogged or covered some details after the main actors went home," he notes.

Dark Water was shot in the anamorphic 2.40:1 format, which Salles says Beato suggested. "Working in the widescreen format had not crossed my mind," says Salles. "In fact, I had thought of the opposite: working in 1.33:1 to lock the characters into their specific realities. But Affonso's perception was that in a ghost story, what you don't see is actually more interesting than what you do. Also, with anamorphic, the area that can potentially remain in the shadows is larger, and the margin for your imagination to expand is also enhanced."

Of course, shooting anamorphic did present some challenges. "Anamorphic doesn't have much depth of field," says Beato. "We stayed at T2.8, because if you light

for T4 at the 400 ISO level, it takes you out of your normal perception. Between T2.8 and T4, you've got to double the lighting level, and you lose the subtlety of the lighting. We were at T4 or T5.6 for day exteriors, but most of the film was shot at T2.8." He used a range of Primo anamorphic lenses but notes that he tended to "swing from 35mm to 135mm, because that's what suited the story. We didn't even have zooms. If we had a wide shot, we used a 35mm lens; for a medium shot, a 50mm; and if we were with the character, 75mm or 100mm."

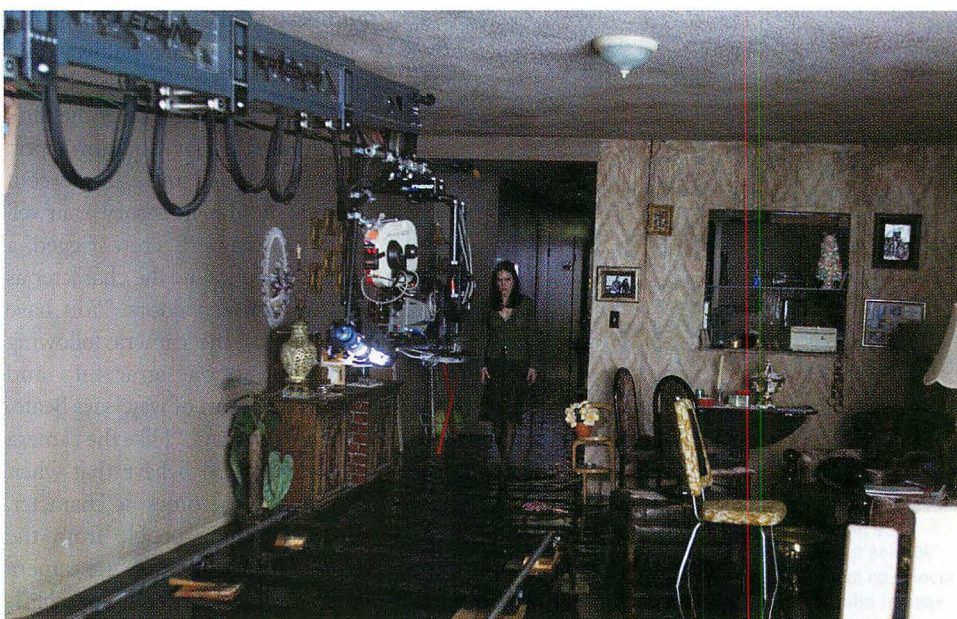
Beato and Salles agree that the thorough prep on *Dark Water* was critical. As the director says, "You reach a common denominator before the film begins to be shot." Adds Beato, "Prep forces you to design. With all the tests, I had more time to come up with technical solutions. When you shoot the movie, you know what you've got to do, and you give the set to the director and the actors. Then you go for beauty, you go for aesthetics, and there's no more time to be technical." The philosophy certainly paid off during the film's shoot, which ran from January to March 2004 in

Toronto, and then moved to New York for four weeks of location work.

The Toronto soundstage included Dahlia's apartment, #9F, as well as the vacant and seemingly haunted apartment #10F, which is situated above Dahlia's apartment in the narrative but was built on the same level of the soundstage; the building lobby, built to match the Roosevelt Island location; various hallways and corridors; and a five-floor stairwell and adjacent working elevator. Another important space, the basement laundry room, was shot in a Toronto location outfitted by the film's crew with washing machines and fluorescent light fixtures.

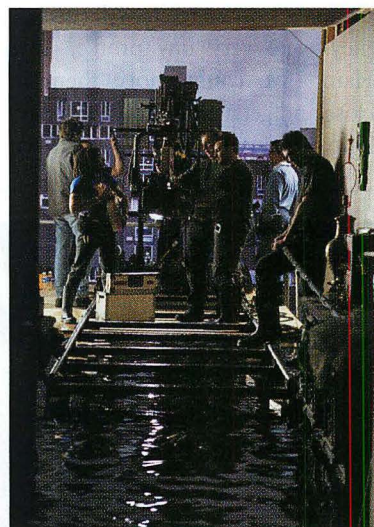
Dahlia's apartment, with its picture window and huge TransLite, featured the most complex blend of lighting sources. It is also, according to Flam, "the only place that features some warm light. It was sort of like an oasis in the midst of that industrial, harsh, green light that tends to make everybody's skin a little olive." Tungsten fixtures motivated by practical sources were sprinkled throughout the apartment. As long as Dahlia or the other characters remain nearby, they enjoy the warm glow cast by the units, which were typically dimmed down to a golden 2800°K.

When Dahlia moves toward the window and out of the tungsten sources' orbit, however, her flawless complexion is afflicted by encroaching exterior light. Outside the apartment window, Flam mixed sodium- and mercury-vapor fixtures to create a sketchy, streetlight look in nighttime scenes. "We'd have a motif in which one side of the building would be sodium, which is very orange, and one would be mercury, which is very blue," says the gaffer. But overall, the effect is intended to seem like a troubling blend of conflicting sources. "It may be a little risky," Flam concedes. "People sort of



stick to interior tungsten units, closer to what the film is balanced for. I first used sodium- and mercury-vapor lights on *The Saint of Fort Washington* [shot by Frederick Elmes, ASC], but on that picture I used them to balance the light in the existing locations, which were homeless shelters. If you don't have any tungsten, the lab can get it back to a neutralized color. On *Dark Water*, we got rid of that possibility by including tungsten light. We were just trying to embrace that [industrial] color and use it in contrast with tungsten. What helps us get away with it is the silver-retention process, which sort of takes the edge off the colors."

Flam creates his own sodium- and mercury-vapor fixtures rather than attempting to approximate them with other sources. "I know how you can color-correct Kino Flos or tungsten or HMIs to closely resemble them, but you never get the exact mercury or sodium look because you're missing whole portions of the spectrum," he notes. "I buy the parts; basically, you just need the ballast, and you can put the light in almost any fixture. I use them in regular scoop lights, and I've put them in Chimera lights to

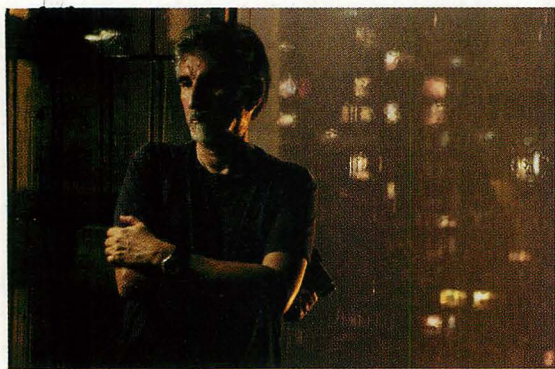


Scenes set in the apartment complex were shot on stages in Toronto, which allowed the filmmakers to accommodate the necessary equipment.

get a softer look."

For day scenes, the Rosco TransLite was switched from a backlit nighttime look to frontlit mode. At that point, the assault on the movie's lighting balance came from HMI lights outside the window. "I hate to use HMIs when you're in a studio, but we had to go with them because we wanted that contrast of cool light outside and tungsten light inside," says Flam. "We used HMIs gelled with just 1/4 CTS. The entire movie takes place during rainstorms, so the coolness worked." The harshness of the movie's look was somewhat miti-

Seeping Terror



Beato (above) says he and Salles strove to lend the story a sense of realism.

He notes, "Movies today involve so many special effects that you start feeling everything is artificial, and that pushes you away from what's happening dramatically."

gated by the overall softness of the sources; the HMIs were in softboxes on chain motors so they could be raised to create an impression of "really soft skylight." In addition, two scaffolds supporting nine Image 80s each were employed to provide sidelight. "The Image 80 scaffolds worked really well because they were very low profile," says Flam. "We could move them in close and get a really good soft daylight source, that Northern

European kind of light."

Scenes in the hallway and stairwell spaces, which Dahlia explores over the course of the film, are dominated by sodium-vapor, mercury-vapor and fluorescent sources. In the five-story stairwell shaft, the camera crew rigged a Cablecam to follow the character as she ran between floors. "You have the sense of the camera following her up in a graceful and omnipresent sort of way," says Beato. In general, he says, "I like the camera to be invisible. I believe that when the camera becomes a character, you're detaching people from the drama." Instead, he uses the camera for less apparent effects. For example, there is considerable handheld camera movement in *Dark Water* to reinforce "dramatic instability," says Beato, "but it's very subtle." Similarly, during the many scenes in the elevator, "if you look, you can see

that there are things that could not be shot unless you had a special elevator." During such moments, Beato says, he is relying on the viewer to be too caught up in the tension of the story to notice.

The story's climax takes place at night on the roof of Dahlia's building, and this was shot on a Toronto soundstage as a green-screen sequence. "It was too cold and too dangerous to shoot on the real rooftop," says Beato. "We did virtual-reality tiles of the surrounding city with motion control, so wherever the camera goes, you have something. It's like a mosaic." When the production moved to New York for other locations, filming occasionally became a matter of waiting for overcast skies. Beato recalls, "I tried to conquer the heart of the first AD, and I explained to everybody that we had these weather limitations. But we never stopped because

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of weather; we always had something in our pocket that we could shoot, like a subway scene or something on stage at Silvercup Studio."

Helicopter shots of the Roosevelt Island location were not successfully obtained until after Salles' departure, and Beato credits Ron Goodman of SpaceCam with developing rain deflectors and equipment that protected the necessary cables and electrical systems from the elements specifically for the production. "People don't shoot helicopter shots in the rain, and I'd never thought about why," he notes wryly. "It was funny, because *The Interpreter* was also shooting, and we used the same helicopter. If there was good weather, they would shoot for *The Interpreter*, and if it was bad, they would shoot for us!"

Beato decided early on that he was not interested in doing a digital intermediate (DI) on *Dark Water*.

"You can't deny the state of the art and that there has been incredible progress, but if you put the results one against the other, you see that photochemical is still the best in terms of mobility and other factors," he asserts. "The raw stock is developing at such a speed. I'd say that 5218 has 12 stops of latitude. Panavision's Genesis [digital] camera might have 12 stops, but if you make a DI and compare it with film, forget it—you can see that the definition [of film] is extraordinary."

On *Dark Water*, Beato enhanced that image quality by printing on Kodak Vision Premier 2393. "Premier is a little more contrasty [than Vision 2383], and it gave certain critical scenes that little added punch. The texture of the movie is realistic, and definition gives you realism." This sense of realism, coupled with the suggestion that the shadows contain ghosts or

other elements that cannot be easily accounted for, was like a mantra on the movie. "I don't want to criticize," says Beato, "but movies today involve so many special effects that you start feeling everything is artificial, and that pushes you away from what's happening dramatically." ■

TECHNICAL SPECS

Anamorphic 2.40:1

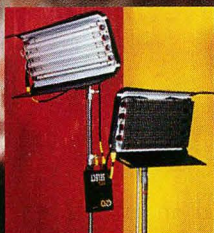
Panaflex Millennium, Gold II
Primo lenses

Kodak Vision2 500T 5218

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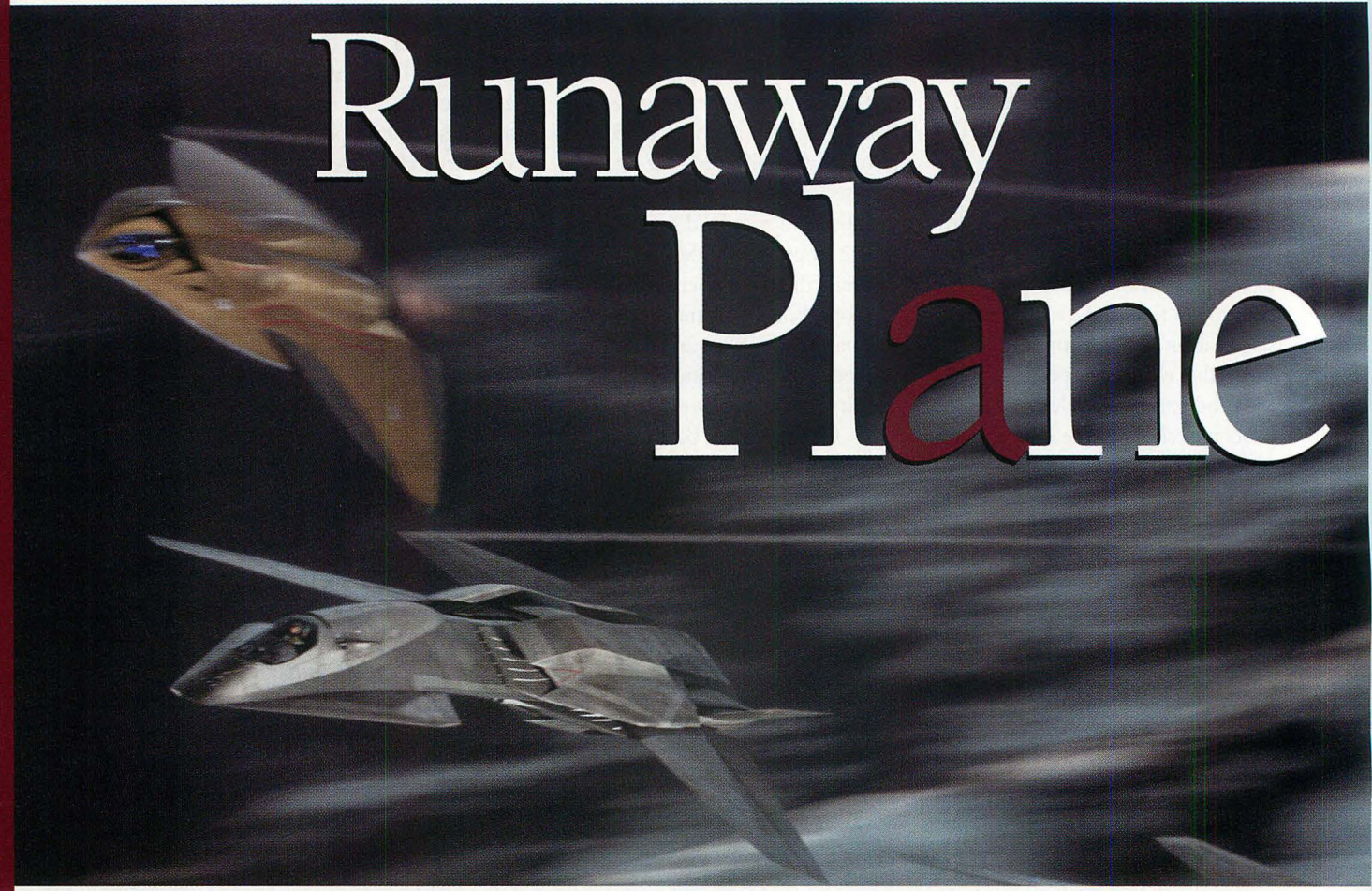


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Runaway Plane

A high-tech military jet threatens world security in
Stealth, shot by Dean Semler, ASC, ACS.

by Simon Gray

Unit photography by Jasin Boland and Simon Cardwell

S*tealth* is a high-octane action film about a trio of young, elite pilots who embark on a mission to neutralize an out-of-control prototype fighter plane equipped with artificial intelligence, a craft called the Stealth Extreme Deep Invader (EDI). The picture's director of photography, Dean Semler, ASC, ACS, has done his fair share of action films, from early classics such as *Road Warrior* to *We Were Soldiers* (see AC Feb. '02) and *XXX* (AC Aug. '02); the latter film was Semler's first collaboration with

Stealth director Rob Cohen. "I had an extraordinary time working with Rob on *XXX* — I think we really pushed the envelope with special effects and stunts," says Semler. "So when he told me about *Stealth*, I thought the concept of the movie sounded fantastic, and Rob's enthusiasm and incredibly dynamic visual approach to the subject matter won me over. To my mind, *Stealth* is a film that hasn't really been done before — at least not in the Rob Cohen way! He always referred to it as '*The Fast and The Furious* in the air.'"

Semler enjoyed an extended preproduction period of five months on *Stealth*. "Even with the breaks I had throughout, it was an unusually generous amount of time," says the cinematographer. "However, *Stealth* is a very complex visual-effects-oriented film, and Rob wanted me involved in those processes as much as I could be. We also did extensive location scouts in Thailand, China and throughout Australia, which is where most of the film was shot. I'd look at the conceptual design work that was being created, as well as the



previsualization animatic sequences Rob was working on with Digital Domain. I also spent a lot of time with production designers Jonathon Lee and J. Michael Riva, discussing the size and logistics of the sets, the specific color and reflectivity of the Stealth fighters, approaches to lighting the sets, and so on.”

“Early in preproduction, Dean gave me a few key words such as ‘heroic,’ ‘hard-edged’ and ‘dramatic,’” recalls gaffer Shaun Conway. “From there, the concepts of the lighting developed as Dean and I worked through the logistics of how all the ideas would be implemented.” A particularly pertinent example is the rather large-scale simulated-travel techniques used with the Stealth fighters. Known as Talons, the fighters are capable of flying through the various layers of the earth’s atmosphere toward the edge of space. Semler and Conway conducted extensive research into how light would change through each of the atmospheric layers. “We looked at color temperatures, levels of ambient light and the different intensities of direct sunlight,” recall Semler. “I wanted to establish what it would look like as the pilots go from the Earth’s atmosphere into near space.”



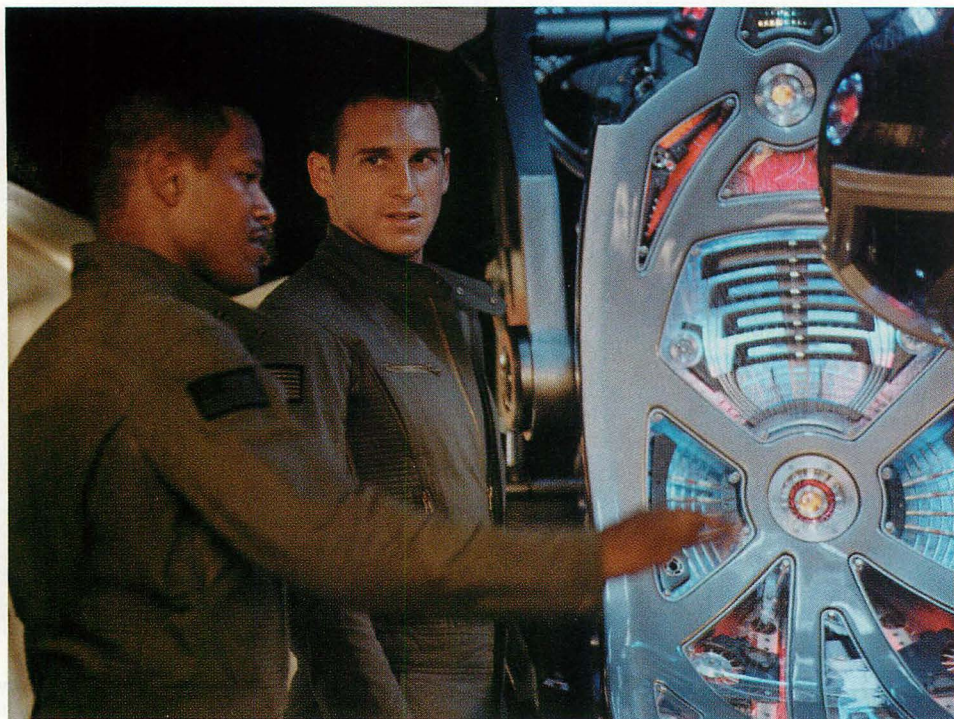
A cockpit set was mounted on a massive gimbal (designed by John Frasier) that allowed the cockpit to barrel-roll, yaw, dive and do other maneuvers. The set was placed in a greenscreen stage at Fox Studios in Sydney that was configured in a horseshoe shape and measured 200’ long and 40’ high. The greenscreen was lit to T5.6 with Kino Flo Image 80s containing SuperGreen tubes. (Semler shot these sequences on Kodak Vision2 200T 5217.) Ambient light was provided by a lightbox that spanned the full width of the stage and held 3,500 Par cans. “The rig had to hug the ceiling to enable the four pick points for our Spydercam

system to attain maximum height in each corner of the stage,” notes Semler. Because this was one of the first sets the production used, the lightbox was built early on in prep. “In the planning stage, we took the art department’s plans of the set, which were all CAD drawings, and then our own CAD designer drew in our lightbox and we fitted that to the set,” explains Conway. “The previsualization department then put in the key camera moves, and when the three elements were put together, we could see how the rig would work for each of the previsualized shots.

“The lightbox was constructed to follow the contours of the cock-

Opposite: A pilotless military prototype jet with artificial intelligence at its core becomes destructive after a lightning strike damages its circuitry in *Stealth*, shot by Dean Semler ASC, ACS. This page: Three top pilots, Lt. Henry Purcell (Jamie Foxx, left), Lt. Kara Wade (Jessica Biel) and Lt. Ben Gannon (Josh Lucas, right and above), are called in to bring the wayward plane under control before it causes a world war.

Runaway Plane



Purcell and Gannon inspect what the military is gambling will be their replacement.

pits," continues the gaffer. "This type of configuration allowed the light to come from anywhere Dean wanted it to. Each section of the box was movable, and the whole thing took my rigging gaffer, Ian Mathieson, and his team two weeks to rig. The Par cans were all tied in together and [programmed] on a chase sequence, so we could nominate a matrix-grid system using areas of about 200 Par cans at a time that would come on and 'travel' across the lightbox. To represent changes in atmosphere, we used different colors and ambient levels. For instance, when the script called for dusk on the edge of space, the ambient level was dropped right off and 20Ks with no diffusion became the dominant source; at the same time, we'd bring up the cockpit lights to create a subtle glow on the actors' faces."

Another important element of prep was determining the flight paths the Stealth fighters would take during their various missions. "Rob and the visual-effects team determined which direction those planes would be flying in at all times, which was extremely useful for me both in

terms of planning the lighting schemes for each sequence and as a means of maintaining the continuity of the light," says Semler. "For example, if the fighters were flying over the Philippine Sea, heading west, I'd know that the sun would be behind them in the morning and on their faces in the afternoon. Or, when they headed north, the sun would be to their right in the morning and their left in the afternoon. Of course, during the dogfight sequences, the direction of the sun changes dramatically every second!"

To give combat scenes a dynamic sense of movement, an additional part of the aforementioned lightbox was constructed in an X-shaped configuration through the center of the main lighting rig. This system used chasers that traveled the Par cans on 'East-West' or 'North-South' axes at the required speed. "Those lights were left as hard sources and would scoot across the canopy, representing the cockpit of the fighter rolling, yawing or whatever it was required to do," explains Semler. "The rig was so well designed and implemented that it was almost

effortless to use." The rig could also function in a "freestyle" mode, and, when required, sequences could be initiated using the Kuper motion-control system, which also operated the gimbal for the cockpits and the show's cable-mounted Spydercam rig. This meant that changes between lighting states could be cued to specific moments during a camera move. "To have that setup was a bit of a coup," notes Semler. "On every film, you attempt to use the technology to achieve something new and different."

The cinematographer also used camera shake to enhance moments of dramatic tension. "What was interesting was how much Rob wanted to push the camera movement," says Semler. "During the shooting of several sequences, the operator said, 'I can't see the actor's face, the camera's moving so much!' When I mentioned this to Rob, he said, 'That's exactly what I want!' That's Rob Cohen for you."

The production spent six weeks shooting on the greenscreen stage. "Greenscreen is certainly not the most exciting thing in the world to shoot — it can be very stationary and unexciting," says Semler. "I'd anticipated using two cameras at the most, but we ended up using three cameras all the time, covering some very complex sequences. We often had our main camera on a 50-foot Super Technocrane that was operated by Mark Goellnicht, one of the best camera and Steadicam operators I've ever worked with. The camera would get the master shot, which was usually swooping in, around or under the cockpit into a mid-shot of the actor sitting in there. My B-camera operator, Richard Merryman, who was my focus puller way back on *The Road Warrior*, did an extraordinary job finding great moments on the 3:1 zoom, generally at 600mm-800mm on extreme close-ups of the actors rocking and rolling in the cockpit. The C-camera was



operated by John Platt and was kept moving on a crane the whole time.”

Semler also took advantage of the Spydercam’s ability to accomplish vigorous and diverse camera movements. “The Spydercam system was set up for all the cockpit sequences,” he says. “We nicknamed it the ‘Fabulous Flying Funnel-Web,’ after the deadly Australian spider. It’s an extraordinary piece of equipment, and I often wonder what someone like David Lean or D.W. Griffith would have done if the Spydercam had been around when they were making films. Todd Semmes was in charge of the Spydercam, and he did an extraordinary job of running it at optimum efficiency. It’s a very controllable, repeatable and safe piece of technology. We got some terrifically dynamic swooping shots on the cockpits that we really couldn’t have achieved on another piece of equipment. The Spydercam is a great toy, but you need to be creative about how it is used.”

In a night sequence in which Lt. Wade (Jessica Biel) is trying to cross the demilitarized zone between North and South Korea, Semler used the Spydercam to its full potential. “Rob designed an incredibly compli-

cated shot for the sequence in which Wade arrives at the North Korean border,” says the cinematographer. “She emerges from the trees, and the Spydercam pulls the camera back with her. She then ducks for cover behind some tree stumps, and after the beam of the searchlight passes by, she moves out and continues to cross the area. The camera pans ahead of her to see the entire border outpost, Jessica comes back into frame, and the camera is still moving in on her as she runs and hides behind a giant rock. The camera then travels in behind her and moves around into a close-up. After she waits for the searchlight to travel across, she leaves the rock, and the camera pans with her as she runs across the field and dives into water to avoid the searchlight beam. The camera arches around and drops down low, almost to water level, into a close-up of her face. The searchlight passes through again, and then the camera pulls up and circles around into a high wide shot. David Elmes, the A-camera first AC, rode remote focus on this very complex shot from a distance; actually, he did a fantastic job on the whole picture, not only with focus, but also with coordinating all of our

equipment from Panavision Australia.

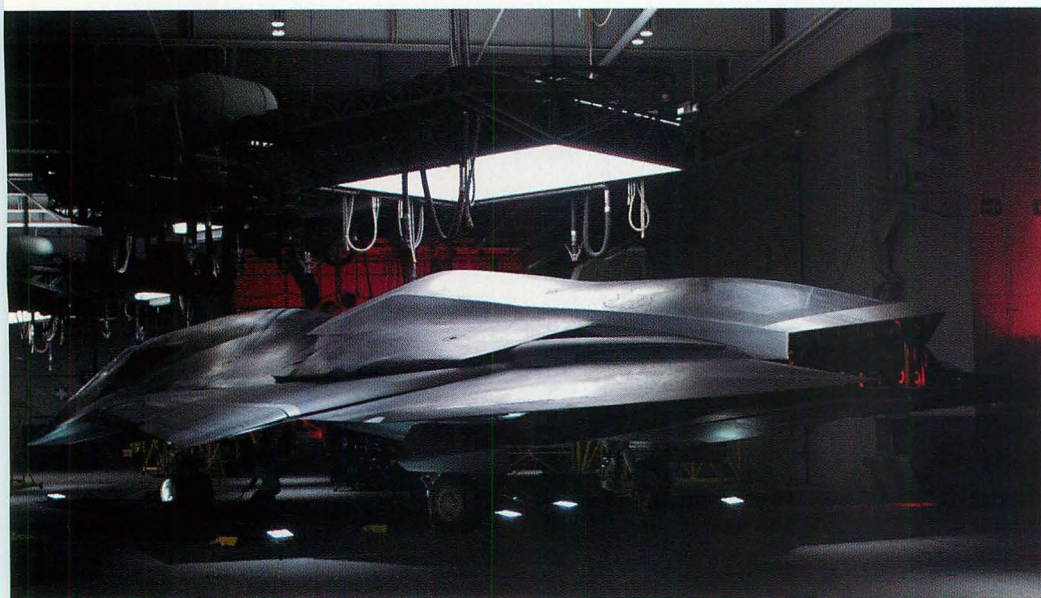
“That one shot took about five hours to execute, but it’s one of those shots that not only sets up the geography and the character’s movement within the space, but also keeps the audience with the character as she attempts to cross the open landscape without being seen. The Spydercam really comes into its own in those kinds of situations. We set the speed and feathering of the camera at the first rehearsal, and then Jessica had to time herself to the camera. She did a great job.”

To light the sequence, Semler used a single-source approach augmented with a 7K Xenon and flares. “We were shooting in an area that was about 25 to 30 acres, with very little in it except earth and tree stumps,” he explains. “I wanted to use one source from one direction to bring out the texture of the landscape, and also to create a harsh, confronting look. I lit the area from about 400 yards away, and the lights needed to reach a height of around 150 feet in order to clear the trees at the edge of the area.”

Conway constructed a 240K light system comprising panels

The military pilots must battle a new form of enemy: a thinking computer with wings and an extensive arsenal of weapons.

Runaway Plane



Above: Practically straight out of a car commercial, the Talon fighter is lit using the same techniques. The hangar set was painted a rather dull gray, but Semler splashed in red accents to enliven things.

Below: The visual-effects-heavy film necessitated extensive greenscreen shooting that Semler covered with three cameras.

containing enough Par64s to provide 30K each. Eight of these panels were then put together to create the 240K source. "Each light is tilt-able and pan-able," notes Conway. "Given that it's a modular system, there are quite a few combinations in which these panels can be bolted together. This provided the flexibility to be able to adjust the source as we went. For the DMZ sequence, the whole rig hung off a construction crane that also had

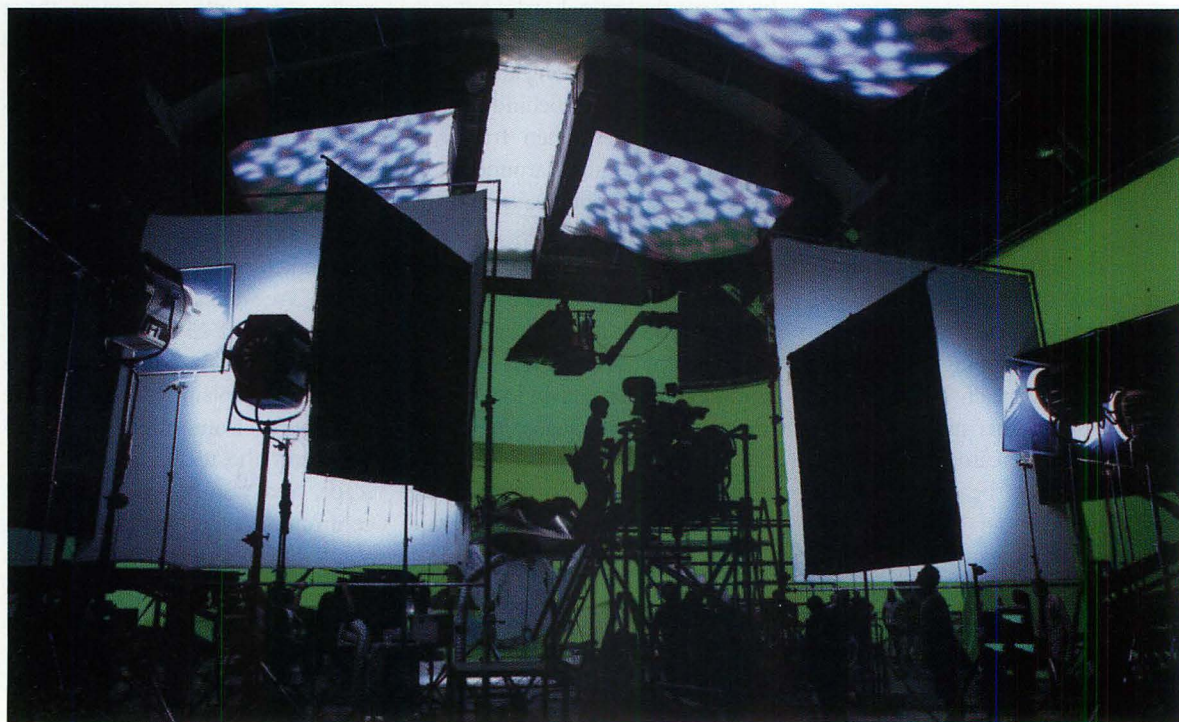
a steel cage for two operators. If we'd put up balloons, the light would have gone everywhere and made a mockery of the fact that the character was trying to hide. With Dean's approach, there were dark pools for Wade to hide in."

The 240K source gave Semler an even T2.8 across the area. A 7K Xenon was used to replicate a searchlight coming from the checkpoint. The Xenon was necessary to

give Semler the light level he needed, which at a distance of several hundred yards was about four stops over.

One of the production's larger sets was the aircraft hangar in which the Talon fighters are kept. "The hangar set was indeed extensive and was painted a rather dull gray — it resembled a giant 18-percent gray card," recalls Semler with a chuckle. "I was initially a bit concerned about how to make it look interesting. During a location scout on a U.S. Navy aircraft carriers, I noticed how the red lights dotted around the ship really popped against the gray walls. I took that approach with the walls of the hangar, splashing red light on them for punctuation."

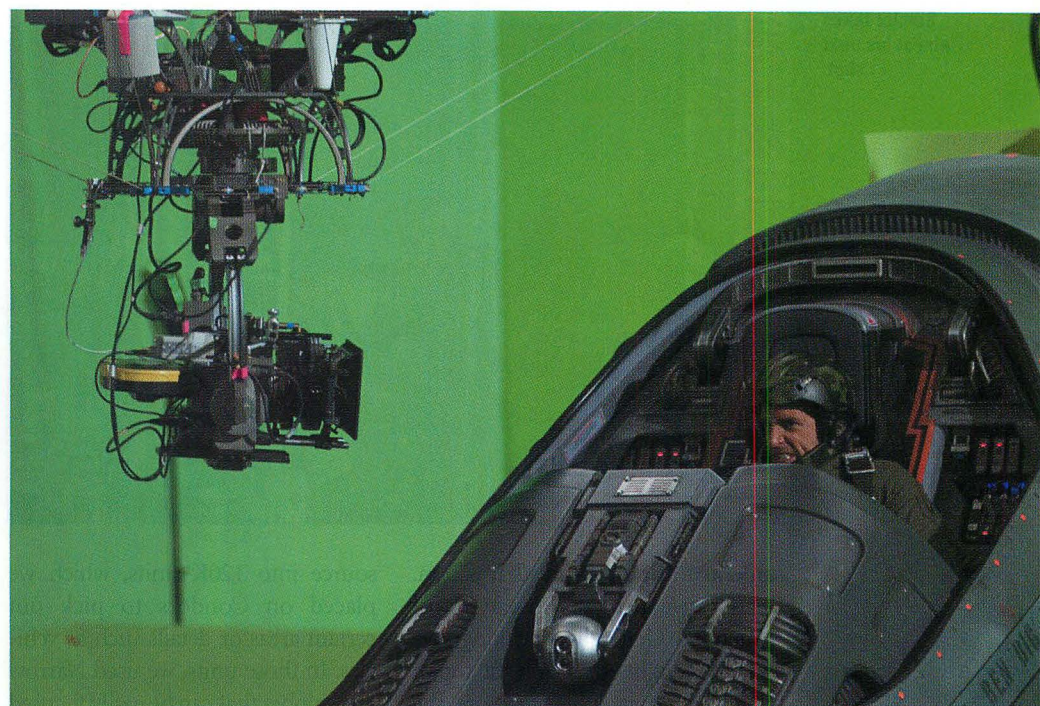
For the fighters inhabiting the hangar, Semler adopted techniques often used in luxury-car commercials. "It was important that the planes look sleek and glamorous because they represent the ultimate in technological advancement," he says. "I had Shaun build lightboxes covered in soft silks that were shaped in the configuration of the plane. Inside, we crammed in as many tungsten-



balanced Kino Flos as possible, filling absolutely every square inch. These rigs were designed to be seen in shot, functioning as the worklights for the mechanics. Accordingly, we had different levels of intensity for different needs. There was a 'standby' look, with about half the tubes on, and then the 'refueling' look, which was with all the tubes on. We also put a dozen or so mercury-vapor worklights under the planes to get kicks out of the wings and fuselage." To avoid visual repetition in the hangar sequences, Semler created different types of daylight coming in through the hangar door.

One of the setpieces in *Stealth* is an explosion that takes place when Lt. Gannon (Josh Lucas) escapes from an enemy airfield by shooting open the hangar doors with a missile. AC visited the set when this sequence was shot at Sydney's Schofield Airport, which has been closed for 11 years. The production used a hangar that had previously housed the Goodyear blimp. "The sequence entailed the doors being blasted open and a huge fireball bursting out some 50 yards," explains Semler. "The vehicles outside were thrown into the air and across the tarmac, as were half a dozen stunt guys on cables who were jerked backward at a rate of knots! To cover this once-only action, I set up 14 cameras, as many as I've ever set up. We sent one camera up in the helicopter; there were several High-Speed Panastars and Arri 435s in crashboxes at ground level, operating at 120 fps with 28mm and 30mm lenses. Key grip Paul Thompson had designed crashboxes that could be moved and adjusted very easily and were literally bomb-proof. We had two direct hits in the film, and in both cases the shots were fantastic up until impact, and only minor damaged was caused to the cameras.

"I didn't want to watch this sequence on the monitors because it's probably the biggest stunt I've ever shot and I wanted to see it with



my own eyes," he continues. "There's always a bit of a sick feeling in your stomach when something of this magnitude is going to happen. Several stuntmen were jerked on cables through fire and flying, burning vehicles. When the actual stunt went off, it happened so fast, but precisely as [special-effects coordinators] John Frasier and Dave Young had predicted. On playback, all of the footage was fantastic. Every single camera had captured a spectacular moment or two. We had dailies of this

sequence printed on film simply because it was so spectacular to look at; the images at 96 fps or 120 fps were stunningly beautiful, almost religious. That was one of the few times we saw film dailies throughout the shoot." (The filmmakers viewed high-definition video dailies most of the time.)

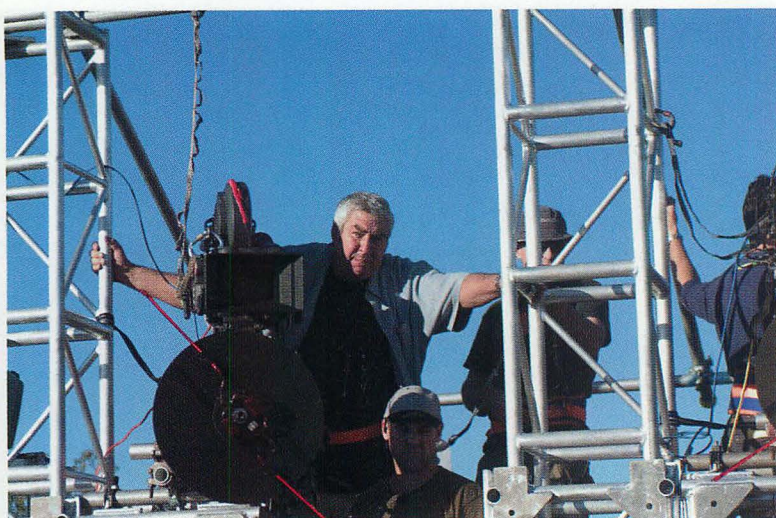
"When you're covering an action sequence with 14 cameras, you have to use a universal lighting system," notes Conway. "It's all about the action and the placement of

Above: The Spydercam cable rig was employed frequently, even on greenscreen sets, to provide dynamic camera movement around the jet plane mockups. Below: Biel is prepared for a virtual ride.



Runaway Plane

Semler takes aim at his next shot.



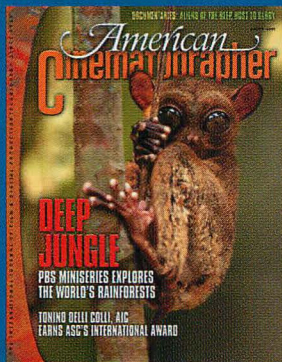
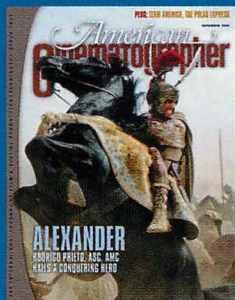
cameras to best capture that action. Dean's an expert at those types of sequences. Generally speaking, we had a floodlight effect over the top of the hangar that lights it before the explosion; this light is essentially a worklight for the people in the airbase. We broke the 240K mega-

source into 120K units, which we placed on Condors to pick out certain areas or details such as vehicles. In those units, we used Narrow Spot globes that can be easily focused onto specific areas."

Throughout the production, Semler made extensive use of his

own version of a "preview system" that is favored by Don McAlpine, ASC, ACS. "I use a Canon EOS-1Ds 11.4-megapixel camera, an Apple G4 Powerbook, and an Epson 2200 printer. It was so close to the dailies we saw. I'd send these stills to Trish Cahill, the dailies colorist [at Cutting Edge Post in Sydney], and she'd match the look of the stills. Brendan Shambrook operated the system I used. If you were going to clone a human being, it'd be Brendan. He'd worked with Don McAlpine on *Peter Pan* and was a huge asset to me, not just as a digital wizard, but also as a co-worker and friend. We kept a full record of each setup, including charts for each photo indicating where the light was coming from, what the light was, what the stop was, the stop on the greenscreen, the key-to-fill ratios and what gels were used. This was for the visual-effects team to reference some time later."

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Semler digitally graded *Stealth* at EFilm in Hollywood, a relationship that began on *We Were Soldiers*. "Rob and I did XXX there," says the cinematographer. "I am a great believer in the digital intermediate, and it's a great process for a film like *Stealth*, in which there are many complex visual effects that will need a bit more than simply overall timing for color and density."

Apart from the greenscreen sequences, Semler used Kodak's Vision2 500T 5218 for *Stealth*. "It's a great stock. For interiors, I rate it normally, just because I need that amount of light to get a stop of T2.8 to T4 on anamorphic lenses. However, I've also pushed it to ISO 1,000 on occasions when I needed more stop, and it held up pretty well. If the negative is given a healthy exposure, the blacks don't get too milky. I push the stock if I'm shooting with a long lens and want to keep

that look, rather than switch to a shorter lens. Shooting on an 800mm is a very different proposition than shooting on a 270mm, and the results are much better, I believe. For day exteriors, my rule of thumb is to rate 5218 at ISO 400. Then I put on an 85N.6, which brings it down to ISO 64. After years of shooting documentaries, my eye became trained to think at 64 ASA. I rarely use a meter outside.

"In summing up, I must mention the units that created the rest of the movie, including second-unit directors of photography Brad Shield, David Burr and Jerry Calloway; the Spacecam unit operated by Dwayne McClintock and pilot Gary Ticehurst, who shot the hundreds of background plates; the Astrovision Learjet unit operated by David Nowell [ASC] and flown by Craig Hoskings; and especially Russell Boyd [ASC, ACS], who shot

the Thailand sequence for me," Semler adds. "But above all, *Stealth* is a heavy visual-effects film, and full credit must be given to Joel Hynek of Digital Domain, who, with his great team, created a real world around the hundreds of cockpit greenscreen shots we had done on stage." ■

TECHNICAL SPECS

Anamorphic 2.40:1

Panaflex Platinum, XL;
Panastar; Arri 435

Primo, C-Series and
E-series lenses

Kodak Vision2 200T 5217,
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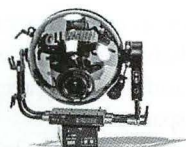
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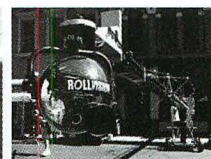
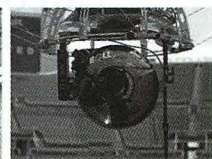
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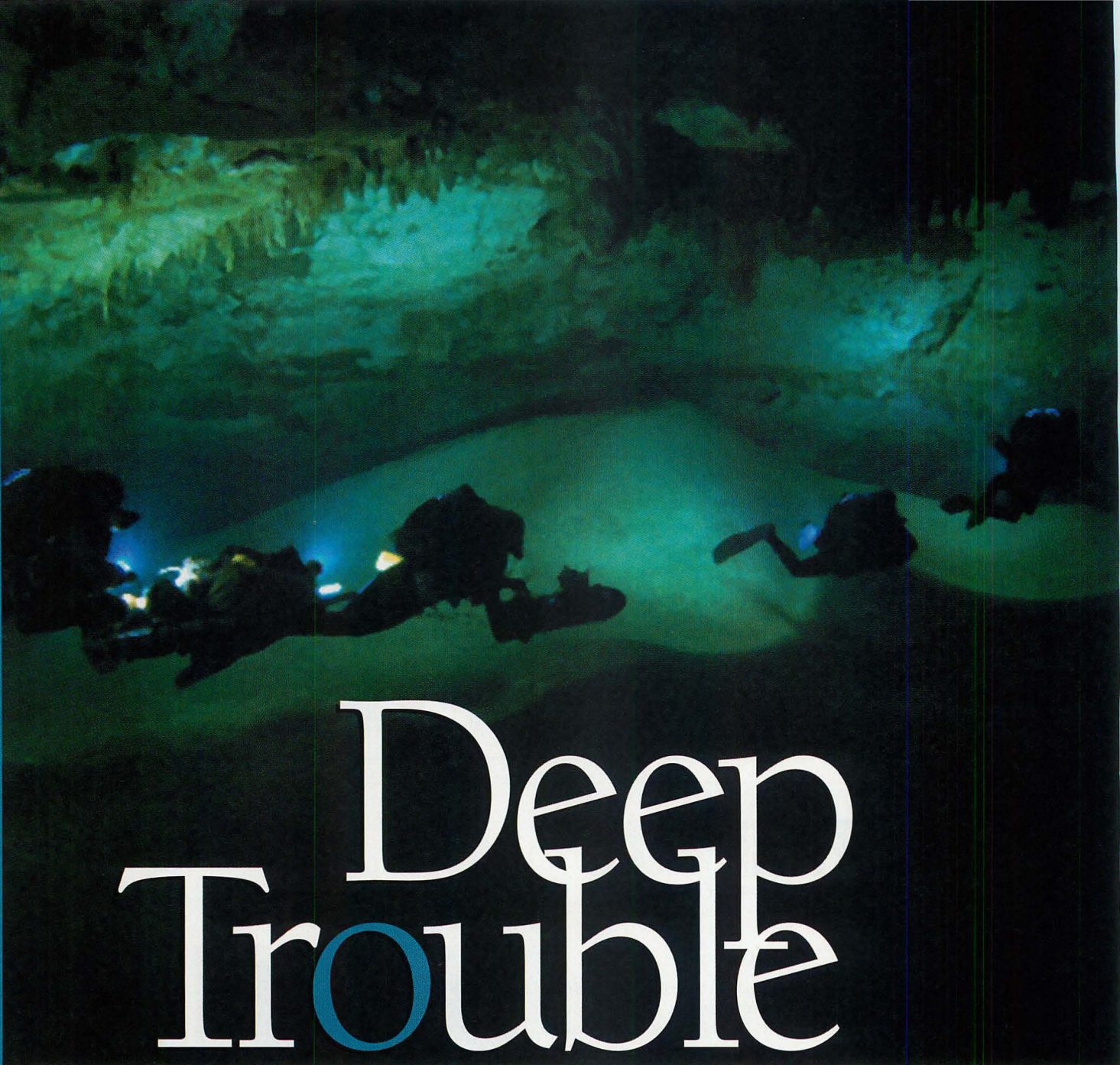
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Deep Trouble

Director of photography
Ross Emery, ACS and underwater
cinematographer Wes Skiles mix
35mm film and high-definition
video for the thriller *The Cave*.

by Stephanie Argy

Unit photography by Cos Aelenei
Additional photos by Ross Emery, ACS and Paul Heinerth

When director of photography Ross Emery, ACS read the script for *The Cave*, a horror movie set in a system of underground caves, he knew it was the most difficult project he'd ever been offered. Most of the story takes place in an environment with no light whatsoever, and lengthy sequences unfold in cavernous underwater spaces.

The movie tells of a team of professional cave explorers who are trapped underground while search-

ing for several people who disappeared while investigating a cave system under an old church in Romania. The team soon discovers that the cave is inhabited by unusual life forms that thrive in the closed-loop ecosystem that has evolved underground. Some of the organisms begin threatening the explorers, who speculate that the life forms are trying to take up residence inside them as parasites in order to learn how to survive above ground.

In collaboration with underwater director of photography Wes C. Skiles and his team of divers, Emery and director Bruce Hunt decided to shoot all of the picture's land-based scenes on 35mm, and all of the underwater sequences on high-definition (HD) video using a Sony HDC-F950 with 4:4:4 chroma sampling. The plan was to shoot some of the underwater scenes practically in a real cave system in Mexico and the rest in tanks on stage in Romania.

The first three months of the shoot took place at Media Pro Studios in Romania on sets both wet and dry, including a complete underwater cave system with a variety of caverns. This was followed by six weeks of second-unit photography in caves at Hidden Worlds, Cenote Park, in Mexico's Yucatán peninsula. Hidden Worlds was discovered in the late 1980s, when a limestone-mining operation working in the jungle kept losing equipment because it was sinking into holes. Explorers went below the surface and found a vast cave system, for which they have so far mapped 40 entrances and 200,000' of linear passages, including some huge, spectacular caverns that are featured in the movie.

Among those explorers was Skiles. "One of my great pleasures is to explore and map underwater caves," says Skiles. "I go on expeditions, find new caves, and explore them to find out where that water is

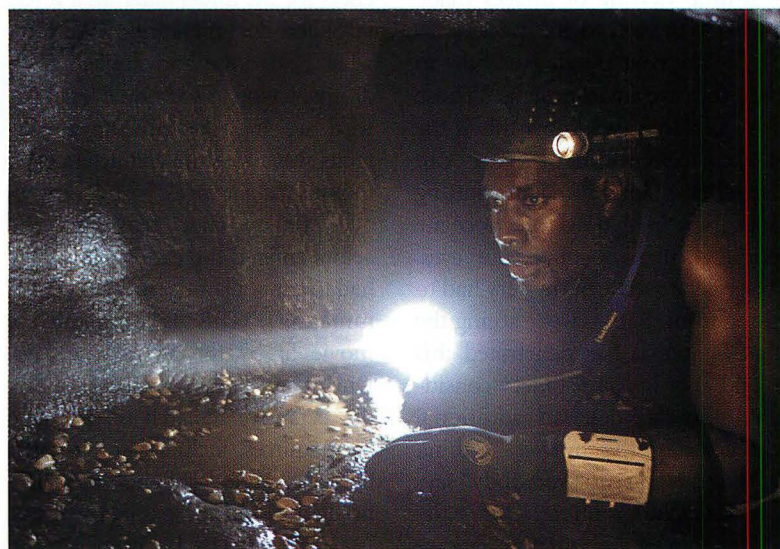


Opposite: A team of explorers (portrayed in this shot by their underwater stunt doubles) head into the depths to search for missing persons in the thriller *The Cave*. This page: The explorers (Piper Perabo, left, and Morris Chestnut, below) discover that the cave's drier environment is no less perilous.

coming from." Skiles also has made numerous documentaries, often using his own Sony HDW-F900 cameras. Hunt, Emery and the producers of *The Cave* were intrigued by the idea of shooting the underwater sequences in HD, but they wanted to see tests, so Skiles and Anthony S. Lenzo, the underwater technician and second underwater camera operator on *The Cave*, put together a side-by-side comparison of footage shot with an Arri 35-3, a Sony HDW-900/3 and a Sony HDC-F950 4:4:4 camera.

The HDC-F950 records onto a separate deck in the HDCam SR

format, and, unlike the HDW-F900, which uses 4:2:2 color sampling (meaning that for every four times it samples the luminance of an image, it only samples the color twice), the HDC-F950 samples color as frequently as luminance. Moreover, whereas the compression of the HDW-F900 makes its effective resolution only 1440x880, the HDC-F950 delivers a true 1920x1080 image. But the test results were even more startling than the specs might suggest. "The F950 and film images were pretty much a tie, and the F900 footage was inferior, especially when taken to the interpositive and



Deep Trouble

Director of photography Ross Emery, ACS took this photo of one of the cave sets, which were built onstage in Romania.



internegative stage," says Emery. "The advantages of no reloads and real-time viewing of images made the F950 the way to go."

The next puzzle was how to light the cave environments. "Those who explore caves know this is the darkest environment you can know," says Skiles. "Imagine putting your face in a bowl of chocolate pudding, then opening your eyes. The movie's sense of mystery had to come from that — we're seeing the first light that has penetrated this world." For his part, Emery considered the darkness an additional character in the movie. "I think darkness is scary to everybody," says the cinematographer. "Our early discussions were about how dark we

could take the film, how we could reveal clues." He found some references for the underwater light levels in Skiles' documentaries. "We took what he'd done and applied it to drama, trying to see a little less than we'd see in a documentary. Our focus was more the characters than the spectacular caves."

Emery knew that once the actors entered the cave system, they had to carry all of the sources of illumination. "This is essentially a movie lit by the actors," he says. During prep, the cinematographer did extensive research on portable light sources, including LED flashlights, Xenon flashlights and HID flashlights, which are used by divers. "At one point, I probably knew more

about flashlights than anyone else." Through testing, Emery determined that Dive Rite H10-HID lights were a good solution, and he combined those with Xenon and LED units.

The actors — and the divers doubling them for the underwater sequences — all had to learn how to light their environments. Skiles recalls, "I told the stunt divers, 'This is the reveal, this is the emotional high point, you need to rake the light like this.'" As the characters' situation becomes dire, their light sources gradually disappear. When the explorers first enter the caves, they have a lot of light sources, many of them carried on a large sled. (The sled was based on one that Skiles helped designed in 1988 to carry food, camping gear and cylinders into an underground river that runs below the Nullabor Desert in Australia.) But gradually, their lights fail or are destroyed or lost. "That was a progression I was keen to build into the story," says Emery.

Emery also wanted to make sure that the look within the caves evolved over the course of the picture. The cave systems already offered a variety of terrain that helped suggest the progression of the story — the characters pass through wet caves, underwater caves, underground rivers, ice caves, cliffs, and, finally, a cave lit by the characters' ignition of methane vents (part of their effort to foil the light-sensitive creatures pursuing them). But as the explorers' feelings about the cave change from curiosity to fear, Emery alters his compositions, going with tighter lenses and more cramped framing. As divisions in the group become greater, some characters are framed differently to emphasize their more difficult circumstances. Emery also used a timing shift box to deregister the shutter and movement of the camera, with tilt-shift lenses to skew the image of Jack (Cole Hauser) as the infection he contracts in the cave starts to overtake his system.

The film sequences of *The Cave* were shot in 3-perf Super 35mm 2.35:1. Emery and Hunt wanted to use the widescreen format to frame two or three characters together in order to maximize coverage and foster character interaction. Emery wanted to avoid big crane moves and locked-off shots because he wanted to maintain a sense of constant motion. Given the emphasis on handheld camerawork, he chose two Arricam Lites (provided by Arri Munich) to make things as easy as possible for the operators.

Emery shot most of the picture on Kodak Vision2 500T 5218, but to give a prologue sequence set in the 1950s a grainier, lower-contrast look, he used Vision 500T 5279 and pushed it one stop. All of the processing was done at Kodak Labs Romania. "That lab is as good as any I have used in the world, maybe better," says Emery. "[Lab manager] Cornelia Popa and telecine grader Alex Ciocan both went to great lengths for us and made my job as easy as it could have been.

"We had dailies transferred from neg to video, but I also had select shots printed at the lab just so I could keep track of printer lights," continues Emery. "This is such a dark film I wanted to be sure I was printing at a reasonable level. If the dailies looked a little too dark, I'd get the shot printed, and if I was printing in the 40s I knew I was on track. It's often hard to make accurate judgments with video dailies, because you don't know whether it's you or the grader whose work is too dark."

Emery used Zeiss Ultra Primes, mainly because of their ability to stand up to flashlight beams being pointed directly into them. The 28mm, 40mm and 65mm lenses were his workhorses. "I'm not a fan of very long lenses because I think they separate people from their location. With wider lenses, you feel like you're there with the character. Also, when you have the great sets we had,

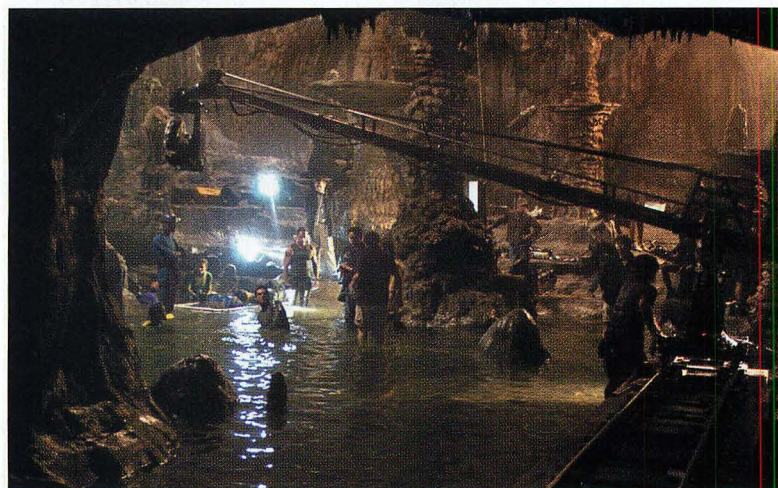


you want them to be a part of the film."

Skiles chose a single lens for the HD material, a Fujinon HA13x4.5ERM EFP-style zoom, which was complemented by optics in the housing built for the HDC-F950 by Amphibico. Ron Hand, president of Amphibico, says the optical elements of the housings are designed to remove the diffraction factor of water. "It's a whole series of steps and sags," says Hand. "There are five elements of glass to achieve this. The aspheric element is made of

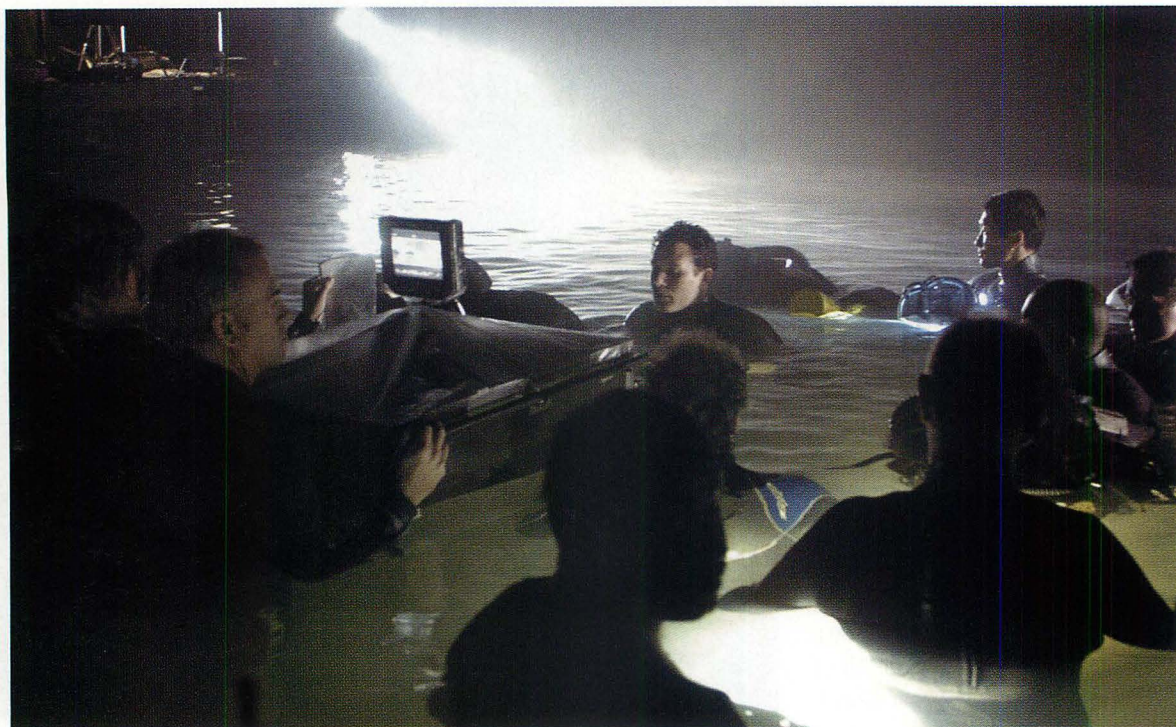
coated optical acrylic, about 5-by-10 inches in its 16x9 configuration and fairly thick in places." The result is that even when a camera is half submerged, there is no distortion to the image, and edges stay straight. The image was so clean that at one point, when editor Brian Berdan needed a POV for a character above the surface looking at the top of a cave, he cut in an underwater shot, and even though it was 35mm cutting to HD and a dry shot cutting to an underwater one, the shots fit together seamlessly.

Cranes helped create dynamic shots in the enclosed environment.



Deep Trouble

Right: The crew films the explorers as they form a circle to ward off a mysterious cave dweller. **Below:** Underwater director of photography Wes Skiles (center) and underwater gaffers Chuck Stevens (left) and Tom Morris (right) prepare to shoot at 500' in Hidden Worlds Cave, Tak Be Ha, Yucatán, Mexico.



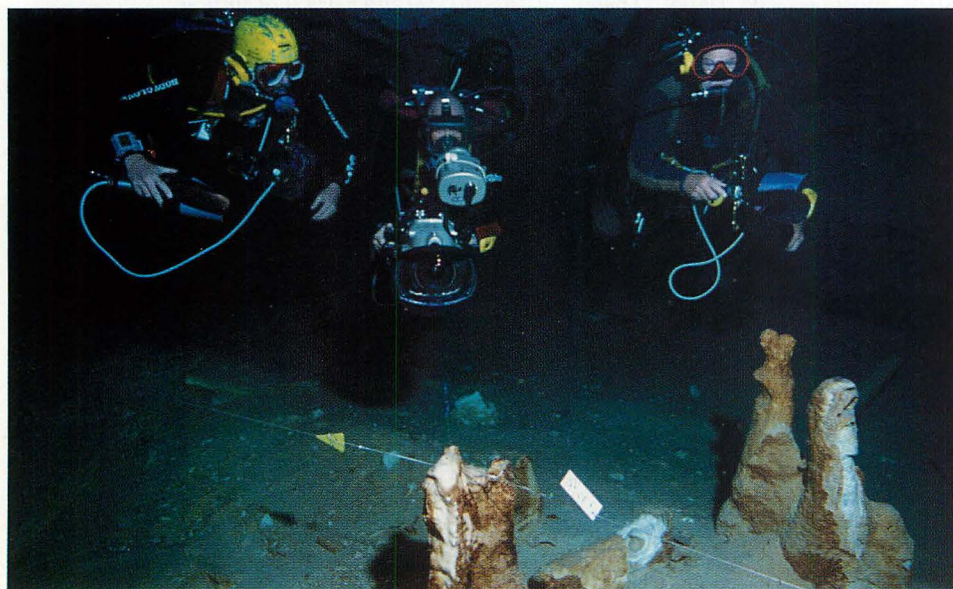
Amphibico housings are built specifically for a given camera. Because the HDC-F950 was new when *The Cave* was shot, the company adapted a housing for the F900 and developed a way to run fiber-optic cables into the camera to transmit power and audio and video signals. The housing gave the underwater operator full access to zoom and focus, while Nick Theodorakis, the HD engineer, controlled color

and iris from above the surface.

Theodorakis and Lenzo also hacked into the internal comm board of the camera and modified it so it would integrate with an Ocean Technology Systems communications system. This allowed, for the first time, fluid communication among all parties working both above and below the surface, even when the underwater crew was deep within the caves. "When we were

going in the full length of the fiber cable — 1,900 feet — I realized the image before me was of people who were half a mile away," says Theodorakis. "It was mind-boggling to get perfect image and communication in one of the most dangerous places in the world."

The image from the HDC-F950 was sent up through the fiber pipeline into a Sony HDCU-950 CCU camera-control unit. From there, the dual-link 4:4:4 signal was distributed into a SRW-5000 deck, which recorded the image onto tape in HDCam SR mode at full 1920x1080 resolution, compressed 4:1. At the beginning of the shoot, the filmmakers considered recording uncompressed footage onto a hard drive, but they found the difference between compressed and uncompressed footage almost impossible to discern with the naked eye — and they worried that recording onto a hard drive might be inviting disaster, given the conditions of the shoot. "I didn't feel [the technology] had reached the point where we could bring it into the anti-tech environment of the



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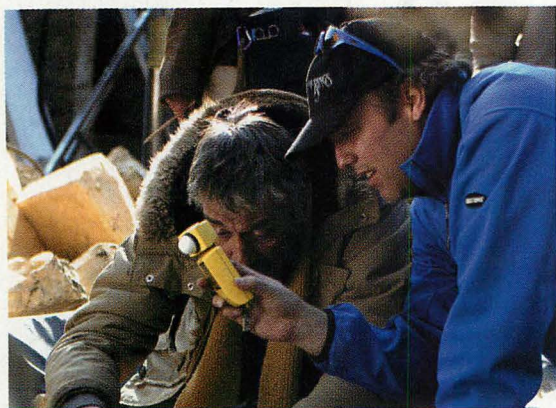
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Deep Trouble



Emery checks the light on actor Marcel lures.

Mexican jungle," says Theodorakis.

Still, he adds that almost every 4:4:4 project he has worked on has taken place under challenging circumstances — rain, sleet, snow and hail — and he has had no problems. On *The Cave*, however, he faced two major logistical difficulties. First, electricity in Romania and Mexico was a little dodgy; he controlled the situation by keeping universal power conditioner back-

ups going at all times. "Our power would just suddenly shoot down, but with those backups, we never lost a take," Theodorakis reports.

The other problem was that the humidity level was at nearly 100 percent both on stage in Romania and in the Mexican jungle, and on the first day of prep in Romania, the team found that the deck would not record because of the moisture. Theodorakis and Lenzo discovered they could solve the problem by sealing the deck into its case overnight and pumping in nitrogen. "That would carry over for the entire day," Theodorakis says. "Once we started doing that, we never had a problem."

Emery had used HD on commercials before filming *The Cave*, and he says he's very pleased with the way the format is evolving. "Over the last year or so, there's been a change in direction from the companies supplying HD technol-

ogy, and it has become much more friendly for feature production. Within the next few years, I expect the methodology to be refined even more."

He notes that one of the challenges on *The Cave* was that the HD footage had to precisely match 35mm, and he found that the digital medium behaved differently in interesting ways. For example, when flashlights were pointed directly into the lens, "with film, the entire exposure lifted, but with HD, it didn't — you'd get a bright spot and a flare." He adds that in general, he felt fortunate that the movie's imagery is so dark, because he noticed more differences between 35mm and HD in the highlights through mid-grays than on the darker end of the image.

Although the look of the underwater 4:4:4 footage was the main reason the production chose HD, another advantage turned out



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to be the time it saved the crew. Because the video signal was transmitted to the deck above water, there was never a need to change a mag. In Mexico, it took the divers as long as 45 minutes to swim out to the underwater location, so if they'd had to go back and forth to reload, the work would have been broken up with long interruptions. According to Lenzo, the only time shooting had to stop was when stunt scenes needed to be reset. "We had the ability to roll constantly," says Lenzo. "It was amazing."

Visual-effects supervisor Payam Shohadai of Luma Pictures says that when working with the 4:4:4 footage, the effects artists found that there were no compression artifacts, which made it much easier to pull a chroma key.

The Cave was finished with a digital intermediate at Company 3/Ascent Media in Santa Monica.

After the 35mm and HD footage were combined, colorist Siggie Ferstl did the initial color correction, working from discussions he'd had with Emery during the shoot. Emery then joined Ferstl for the final grade, which took five days. "We were able to work very fast and very efficiently," says the cinematographer. "It goes back to how you shoot the film — you shoot it the way you want it to look, you don't say, 'I'll just fix it later.'" The color-corrected digital files were recorded to 35mm at EFilm in Hollywood, and prints were made by Deluxe Hollywood.

Emery notes that the creative and technical choices made on *The Cave* required a lot of bravery on the part of the crew, and a lot of trust on the part of the director and producers. "Making a movie is very difficult, and making a movie with people you don't trust would be damn near impossible." He recalls that as he

looked at the results of the collaboration in the DI suite, he felt that the courageous decisions had always been the right ones. "I'm very happy Bruce let me be brave," he says. ■

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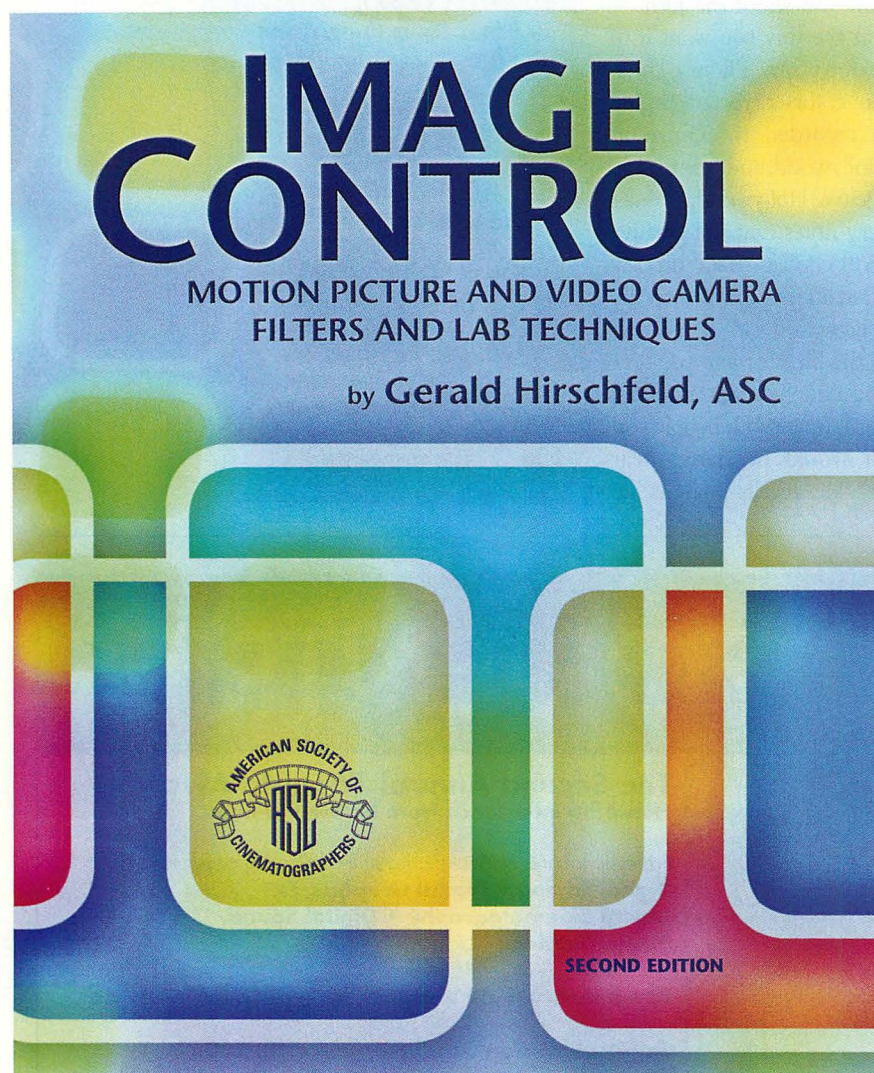
IMAGE CONTROL:

Motion Picture and Video Camera
Filters and Lab Techniques

by Gerald Hirschfeld, ASC



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RENDERING LIGHT AND FILTER (200 PAGES)



Color Photo 10: The effect of a color filter on the scene. The filter is placed in front of the camera lens, and the scene is captured through it. The filter is a color filter, and the effect is a color shift. The filter is a color filter, and the effect is a color shift. The filter is a color filter, and the effect is a color shift. The filter is a color filter, and the effect is a color shift.

THE POLARIZER AND MORE (200 PAGES)



Color Photo 11: The effect of a polarizer filter on the scene. The filter is placed in front of the camera lens, and the scene is captured through it. The filter is a polarizer filter, and the effect is a reduction in glare. The filter is a polarizer filter, and the effect is a reduction in glare. The filter is a polarizer filter, and the effect is a reduction in glare. The filter is a polarizer filter, and the effect is a reduction in glare.

THE POLARIZER AND MORE (200 PAGES)



Color Photo 12: The effect of a polarizer filter on the scene. The filter is placed in front of the camera lens, and the scene is captured through it. The filter is a polarizer filter, and the effect is a reduction in glare. The filter is a polarizer filter, and the effect is a reduction in glare. The filter is a polarizer filter, and the effect is a reduction in glare. The filter is a polarizer filter, and the effect is a reduction in glare.

ADDITIONAL SENSITIVE FILTERS (200 PAGES)



Color Photo 13: The effect of a sensitive filter on the scene. The filter is placed in front of the camera lens, and the scene is captured through it. The filter is a sensitive filter, and the effect is a change in color. The filter is a sensitive filter, and the effect is a change in color. The filter is a sensitive filter, and the effect is a change in color. The filter is a sensitive filter, and the effect is a change in color.

NOTHING AND IMAGE (200 PAGES)



Color Photo 14: The effect of a 'nothing' filter on the scene. The filter is placed in front of the camera lens, and the scene is captured through it. The filter is a 'nothing' filter, and the effect is no change. The filter is a 'nothing' filter, and the effect is no change. The filter is a 'nothing' filter, and the effect is no change. The filter is a 'nothing' filter, and the effect is no change.

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Short Takes

Finding Folds for Beck's "Girl"

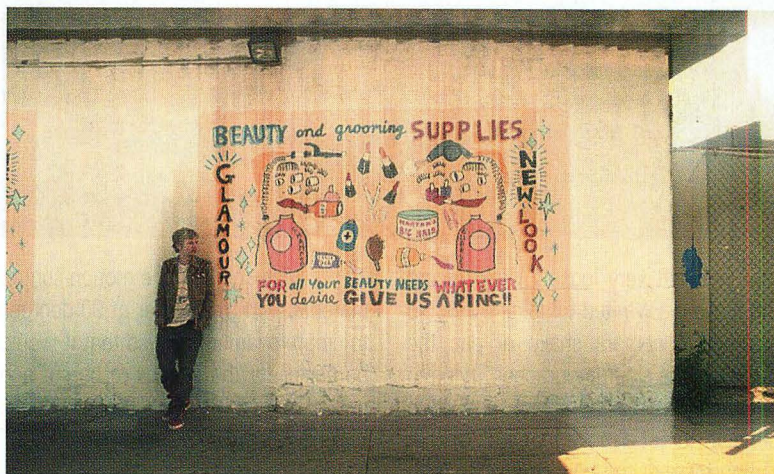
by Stephanie Argy

For the music video for Beck's single "Girl," Motion Theory directors Mathew Cullen and Grady Hall and cinematographer David Morrison took inspiration from the *MAD* magazine fold-ins of Al Jaffee and created an effect in which scenes literally collapse in on themselves to reveal a new image. But even though the effect was a fairly elaborate technical exercise, the style of the video, which was shot in East Los Angeles, has a run-and-gun aesthetic. "You see things that are either handheld and gritty, or motion-controlled and precise," says Morrison. "We drew from both disciplines."

Cullen and Hall say "Girl" presents a dichotomy, in that it sounds sunny and positive on the surface, but the lyrics and underlying tone are much darker. Jaffee's fold-ins have the same duality, they point out. "You see one image, but when you fold it, it becomes something different, sometimes something completely opposite," says Cullen. When the filmmakers called Jaffee to let him know what they planned to do, they "got the godfather's blessing," adds Cullen.

The filmmakers wanted the video to capture the ethnic diversity and artistic vibrancy of Los Angeles. "There's such a great cultural intersection in Los Angeles," observes Hall, "and we wanted the feeling, color and texture of the video to represent that."

The directors and Morrison spent several weeks exploring East Los Angeles, looking for locations and coming up with ideas for looks. They also studied a wide range of movies, photographs and other images, but they determined that nothing fully captured the vitality and richness they wanted to



Singer/songwriter Beck explores some seldom-seen corners of eastern Los Angeles in the video for "Girl."

show. "So many stills were black-and-white images of people with 40-ounce bottles throwing gang signs," says Morrison. "At some point you stop doing research."

"Girl" was filmed over three days at a variety of locations, including a beauty shop that was also redressed as a pharmacy, a laundromat, a park, a flea market and a disco in a Mexican restaurant. Many of the video's extras are locals who happened to be in the area during the shoot, and the feel of the footage is very much like that of a documentary. A handheld camera follows Beck as he passes through the various settings, and from time to time, the world onscreen folds in.

The fold-in effect was derived from motion-control moves done on a Gazelle system from Pacific Motion Control. "Imagine two moves that are the same up to a point, then one goes left and one goes right," says Cullen. "You take those two moves, comp them together, and what overlaps in the middle, you fold in." Because it wasn't possible to "fold" real objects, photorealistic copies of the elements in the

overlapping middle area were created in Alias|Wavefront Maya. All of the elements were then composited together, mainly in Shake.

One reason the filmmakers spent so much time scouting was to find locations that would line up well after being folded — a task that proved to be a complex challenge. Symmetry was important, particularly for architectural elements, and as they looked at prospective shots, the filmmakers had to imagine what the image would look like if the middle were taken out and the two edges brought together — what kinds of words would be formed and what large shapes would be created. "It was fun," says Morrison. "You start to look at the world in a different way."

Once fold-in settings were chosen, measurements were taken, and reference images were made to show what was going to fold in, and what would be created after the fold. But to ensure a seamless flow between the handheld work and the motion-control photography, Morrison built irregularities into the fold-in moves during the shoot by rigging the Gazelle to a tripod



Above: Families picnicking in Hollenbeck Park during the shoot were incorporated into the video. Below: Setting the stage for a "fold-in."

that was left very loose. "We'd record the move we wanted to do, and I would incorporate camera shake or pan too far," says the cinematographer. Trying to get the right handheld feel was often difficult. To get a move that was neither too perfect nor too bouncy for one fold-in, Morrison needed about 25 takes. "I felt self-conscious," he recalls. "I felt how actors feel when they get too many takes. But I finally got it."

Morrison shot the video with two cameras: an Arri 435, which he used on the motion-control rig, and an Arri 235, which he used for the handheld work. He used Cooke S4 prime lenses, mainly the 18mm, 21mm and 25mm, and an Angeniux 25-250mm zoom, which he used with a 2x extender. The aspect ratio for the video was 4x3.

Morrison shot the motion-control material with the shutter at 90 degrees to create sharper lines, so that it would be easier for the images to be cut and pasted in post. He shot "Girl" on Kodak Vision2 100T 5212 and Vision2 500T 5218.

One aspect of Los Angeles that Morrison, Cullen and Hall wanted to capture was its quality of light, especially the gold that envelopes the city at the start of magic hour, and the haze created by the combination of smog and sun on hot days. "That hazy afternoon light can be really surreal," says Morrison. "In places away from the ocean, the haze gathers in the air. There's this warm glow, and shadows aren't really shadows." To simulate the effect for the handheld work, he used a

combination of Schneider Classic Soft and Tiffen Gold filters, but for the motion-control camera, he left the lens clean.

In general, Morrison tried to make the lighting looking native to its environment. In a fold-in set in a pharmacy, for example, he went with a clean, overhead Kino Flo look. With exterior fold-ins, he tried to create a warm sidelit look using HMLs gelled with 1/2 CTO. During the long motion-control moves, such as one that took place at the flea market, the hardest aspect was to keep the lighting consistent. "We were there for five hours, and it was a challenge for the grips to keep chasing the sun, especially with the motion-control rig, the dolly and vendors in the way," says the cinematographer.

One of the Morrison's favorite fold-ins takes place under a bridge, where a homeless man sits amid boxes and papers. As Beck walks past the location, the edges fold in, revealing a fancy living room. Morrison programmed a lighting change into the motion-control system so that for the first part of the scene, a 20K gelled with Full Blue illuminates the man's environment, and for the second part, tungsten-balanced Blondes light the living room. "I was really excited about that," says Morrison.

Because the fold-in setups were so involved, Morrison devised a technical schedule for the lighting, camera and grip departments, explaining what would be needed at various points during the shoot. "As a director of photography, you're often killed each day with loads of questions," he says. "I thought if I could give all that information to the crew, it would help everyone. Things always change, but if you've done your homework, you know what you need for each setup. That frees you up to focus on the moment as much as possible. You have that extra space in your brain, that extra RAM, because you've covered all your bases."

Throughout the shoot, the filmmakers made sure they stayed flexible enough to take advantage of random lucky moments. While shooting in





**Cinematographer David Morrison
films Beck on location.**

Hollenbeck Park, for example, they found many families out picnicking, with little girls in white dresses and little boys in suits. On the spur of the moment, the crew staged a scene in which Beck walks down a sidewalk and children ask him to take their pictures. "It was a simple idea, but we could never have cast those faces," says Morrison.

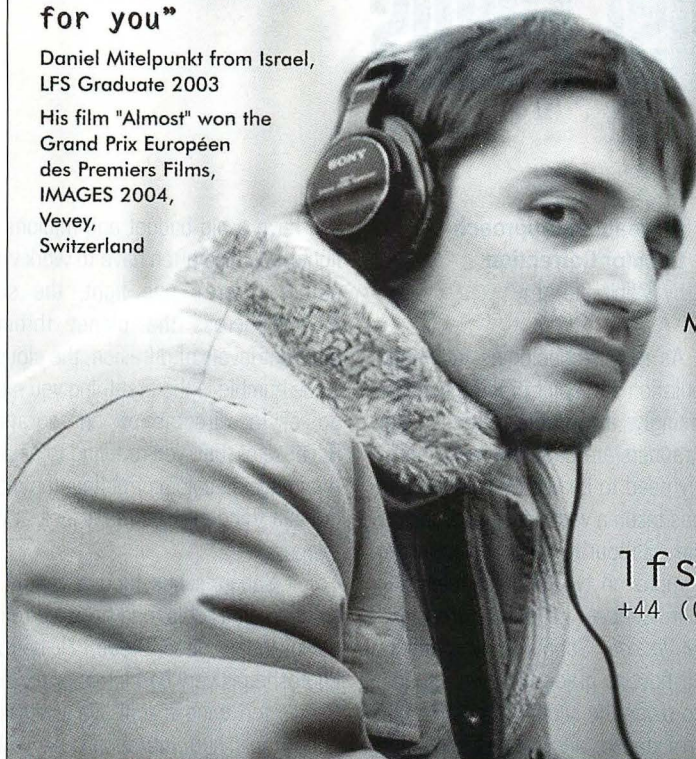
After the shoot, the footage was passed to Motion Theory's 3-D artists and composers, who had to make the fold-ins photorealistic and integrate them into the rest of the material. Although Morrison is seldom involved in post on most of his jobs, this time Cullen and Hall asked for his help. His chief concern, he says, was to ensure that the effects didn't cause the look of the film to deteriorate. "It's hard to make CG look like real-world footage," he notes. "It can take the personality out of the [image] and flatten the look. The tendency is to do a flat pass on everything, and then it never goes back to the strong flavors you had in mind." To prevent that, Morrison, Cullen and Hall graded the handheld footage for the look they wanted, and after the motion-control footage was composited with the CG elements, it was graded to match their work.

Morrison says "Girl" presented a novel opportunity to combine documentary-style cinematography and sophisticated effects. "We were taking a span of visual information and trying to make it into one piece. We were creating a kind of magic realism, what exists in the world if you look a little bit closer." ■

"The great thing is that you find your own way, your own personalized film school within it, and I guess the best school is the one most suitable for you"

Daniel Mitelpunkt from Israel,
LFS Graduate 2003

His film "Almost" won the
Grand Prix Européen
des Premiers Films,
IMAGES 2004,
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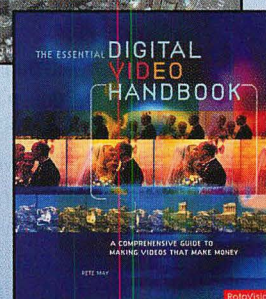
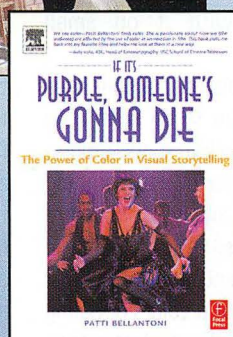
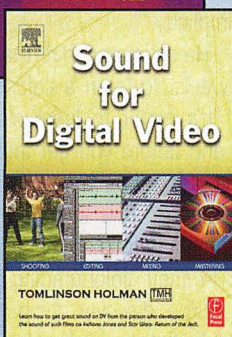
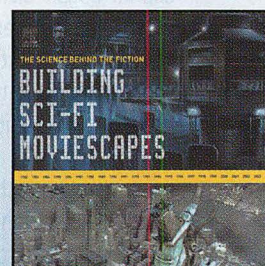
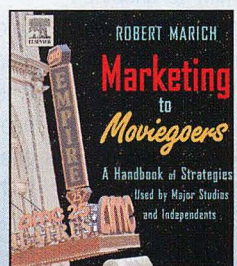
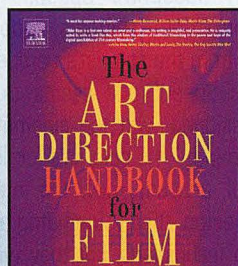
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Post Focus

A Proactive Approach to Color Correction

by Stephanie Argy

As new technologies for image manipulation and color grading become increasingly affordable, some cinematographers are debating how hands-on they need to be with the tools. One who has taken a very active approach is Jérôme Sabourin, the director of photography on two popular television series in Quebec, *Le Négociateur* and *Minuit, le soir*. Sabourin, who taught himself how to grade his own images, also co-owns the Montreal post facility Post In Extenso, and he has spent the last five years experimenting with ways to combine cinematography and color grading. "My goal now is to share what I've done," he says.

Sabourin began his career shooting 16mm and 35mm on music videos, commercials and short films. In 2000, clients began asking him to shoot on video, and he was very unhappy with the results. "I hated video, and I was very frustrated by the 'film look' the post houses were doing, so I decided to explore my own look." He began by experimenting with a compositing application called Digital Fusion. "I realized there was a color corrector in there, so I started to play with it on small projects."

Although Sabourin emphasizes that he doesn't want to be seen as a colorist, he notes that cinematographers are well suited to grading because they must always be ready to respond to new situations, analyze images, and correct any problems. "When I'm in front of a color-correcting software, I can adapt way faster than someone whose job is not to adapt," he observes. "A cinematographer rarely has control over everything. Even when

you have a big budget and millions of lights, you also often have to work with nature. There's one light, the sun, moving across the planet through different levels of diffusion, the clouds. To be humble is the first thing you must do as a director of photography. Because of that, you're trying to assess the image. In color correcting, the most difficult thing to do is *really* look at the image."

Sabourin has tried a variety of color-grading tools, and he is currently using Iridas SpeedGrade. "I believe Photoshop is very bad for color grading — it's too wide a tool. Da Vinci is a good tool, but you won't pay \$1.5 million to have that in your living room." He says being able to have an affordable system in his house has proven very important, because even though he has his own post facility, he prefers to experiment at home. "You have your own tool — it's like your light meter."

In Sabourin's opinion, some color-correction systems approach grading from the colorist's perspective, whereas SpeedGrade seems to have been designed with the cinematographer in mind. "The colorist's job is very technical, and until now the interface has reflected that. Cinematographers are also technicians, but they will ask for simplicity."

He estimates that it takes about two weeks to learn a color-correction tool. "It's better to learn slowly than fast, and before you get into the tool aspect of it, it has to be a toy, like your first camera." It is important for cinematographers to keep the spirit of play alive in their color-grading work, he adds. "You discover things that you wouldn't discover if you weren't playing. The way I work with vignettes, for instance, came from trying and trying."

More than that, though, he finds

that by playing with an image, he has often stumbled across a new look that he wouldn't have found if he hadn't had the time and ability to manipulate the footage himself. By learning the capabilities of color-correction tools, he says, cinematographers can become more actively involved in look development and will no longer have to simply verbalize what they want to see onscreen; instead, they'll experiment with their own look and then hand off the actual settings to the colorist, rather than giving the colorist reference stills that they want the motion-picture image to match. "That's what will change everything in post," says Sabourin. "It's going to be hard for colorists to understand that the director of photography is playing in their courtyard. There are going to be frictions here and there. I think it's going to be about five years before we establish a fluid way of working in this fashion."

Sabourin notes that even though software-based color-correction tools such as SpeedGrade offer more options for the cinematographer, they also require colorists who are accustomed to hardware-based systems such as da Vinci to substantially change their methods, and some have been reluctant to make the transition. "Just last week, I was showing the system to a colorist I worked with a few years ago, and I could feel her skepticism over this new way of working," he says. "At one point, we were talking not about creating an image or a look, but where the controls should be, or why we had to use the mouse to drive the interface. I said, 'I just want a look that I can't get elsewhere.'" Sabourin is currently training several colorists to take over the grading on the series he shoots. "All of the software color correctors are made by program-

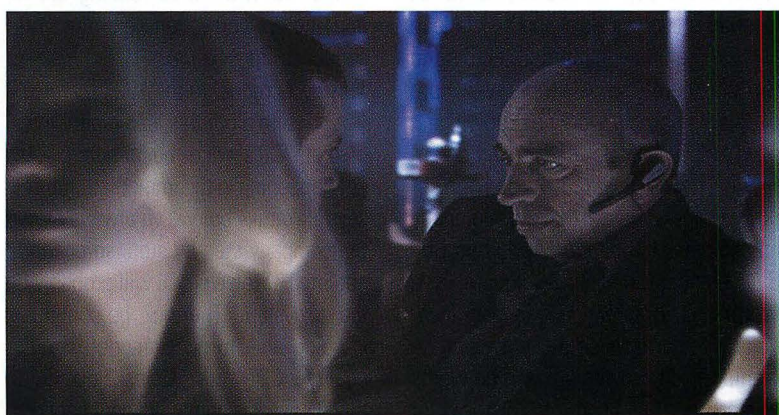
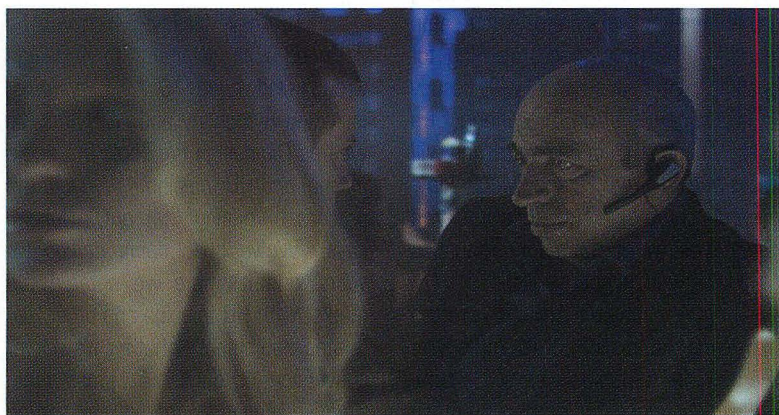
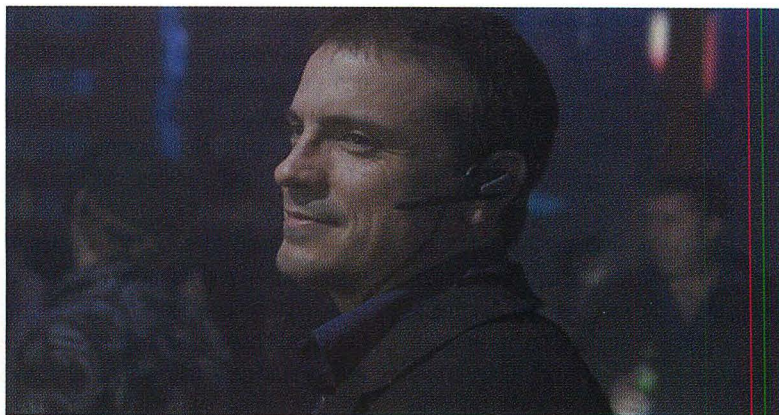
mers, not mechanical engineers. It's hard to ask someone who has worked on a da Vinci for years to adapt. Everything is so customizable that it's a bit chaotic at first."

Although some colorists might perceive a more proactive director of photography as a threat to their jobs, Sabourin believes colorists will become even more essential in such a scenario, and that as cinematographers become better able to control the image all the way through post, they will gain the power to request particular colorists. And having spent years doing all the grading on his shows, Sabourin doesn't recommend that cinematographers try to take on all of the color correction themselves. "If the process is too complicated, we have no family life."

Even Sabourin is now making the transition to a modified workflow in which in he will use his own system to grade representative shots or stills, and then pass a project file and all of its settings and look-up tables along to the colorist so he or she can use those settings as a starting point for the rest of the footage. This is also the approach he suggests to other cinematographers. "The colorist starts with the right feeling, without having to figure out what the cinematographer wanted. It's going to be a lot easier for colorists than it was before."

Another concern is color calibration, but Sabourin explains that if the cinematographer brings the computer he is using to create reference images to the post facility, the colorist can create a setting to compensate for any differences. He has found this to be effective, particularly because the work the cinematographer is doing is really a draft, not a final grade.

Sabourin predicts that cinematographers interested in exploring color-correction tools will devise their own ways to personalize the process. "They're going to find their own customized tools, like their own lenses and filters. It will be their own recipe, and they're going to be chief cook in the kitchen."



These before-and-after shots show the digital grading that director of photography Jérôme Sabourin accomplished on his own on the Canadian series *Minuit, le soir*. Sabourin has experimented with ways to combine cinematography and color correction for several years.

A Creative Expansion

by John Calhoun

For 10 years, midtown Manhattan's Post Production Playground has built a name for itself as a boutique center for film and television-commercial post work, including film-to-tape dailies and color correction, conforming, dubbing, audio services and Avid editing. Without really selling itself as a one-stop shop, the post house has provided video dailies and telecine services for such features as *Crouching Tiger, Hidden Dragon*; *Cold Mountain*; and the recent remake of *The Manchurian Candidate*. Now, with a capital investment and a planned expansion to a new facility downtown, the company — redubbed Creative Mega Playground — is seeking a higher profile.

"We started in the Brill Building with one room," says company founder Eitan Hakami, who now counts five Avid suites, a telecine bay, an audio post suite, a video-dailies facility, and a state-of-the-art screening room among the company's real estate in the same location. The new space, opening for business later this year, will occupy 45,000 square feet on three floors of a West Village production center, and will be known as the Village Mega Playground complex. The location will provide plenty of room for production offices as well as post services.

"We haven't really started marketing the space, but it's already at 90 percent capacity," says Hakami. "There is a need for production-office space in the city." Of course, recent tax incentives such as New York's "Made in NY" program haven't hurt. According to Hakami, there also is "a trend with more people wanting to work downtown, and now that Technicolor has moved downtown, it has created a division of power." He stresses that the company has no plans to abandon its current Brill Building offices near Times Square. "We feel it's much safer to be in both locations. We can service a client when he wants to edit downtown, or if he wants to start there and come to midtown for

post. While feature post has kind of shifted downtown, a lot of TV production and post work is still in midtown." Creative Mega Playground's credits on the latter front include commercials for Macy's, United Airlines, McDonald's and Adidas.

Helping to spur the company's expansion — and its name change — is a multimillion-dollar investment by the Brazil-based Estudios Mega, a lab and digital post house looking for a stepping stone into the U.S. market. With this growth, Creative Mega Playground has also expanded its creative team, hiring, among others, senior colorist Michael Smollin, formerly of Technicolor. "Michael has extensive experience on pretty much every telecine machine that's out there," including the Philips Spirit and Shadow, da Vinci, C-Reality, and Ursa Diamond, says Hakami. Former Technicolor sales representative Blair Lavey, along with Avid "guru" Seth Isaac Buncher, Avid Elite technician Nick Brzoza, and video producer Jonathan Epner, are also joining the team.

The new facility, which will be designed by the Walters-Storyk Design Group, will have 16 Avid systems, including Symphony and HD Nitris, as well as Digidesign Pro Tools (for audio mixing) and HD telecine. "We're in the process of pricing that out," Hakami says. "We've been doing dailies for years, and it's time we entered the market with HD telecine and other HD-related equipment, whether it's down-conversion or dubs." At press time, Creative Mega Playground was getting its feet wet with HD conforming, online, and color correction on the title sequence for *Carlito's Way: Rise to Power*, a prequel to the 1993 feature.

With all of this, can digital-intermediate (DI) services be far behind? "It's not happening in the immediate future," says Hakami, "but we've always grown the company step by step, so once we get into HD telecine, DI will probably be the next step." The trick, he continues, is being able to accommodate studio-quality 2K DI work. "Unless you can do that, DI work is primarily about servicing

those low-budget films that are either shot on Super 16mm and moving to HD, or shot on HD and transferring [to 35mm] for distribution. Having 2K capability opens up a whole other world."

Another world the company is venturing into is content creation, partnering with reality-show specialists Joe Dinki and Cleve Keller to create CMP-TV. Projects in the works include *Upstage*, set behind the scenes of a Broadway musical; *Crusade*, about volunteerism; and an unnamed show set in a Mexican town with an unusually large population of cross-dressers.

But the emphasis at Creative Mega Playground will be on providing a range of post services, and perhaps definitively developing a reputation as a one-stop post shop, after all. Hakami says the company's hallmark has been "quality control, reliability, and consistency," traits that have kept clients "coming back to us year after year." The challenge for the shop in its new incarnation is to successfully expand while maintaining that standard.

The Post Group Now Part of Synergistic Group

The Post Group is under new ownership. The 31-year old postproduction company was purchased by filmmaker and entrepreneur Matt Cooper and his brother, David Cooper, who also own Lightning Media and co-own iO Film and the Santa Monica-based production company The Vault. Together, these companies establish the core of a communal filmmaking environment: a creative campus comprised of a collection of service-oriented boutiques offering one-stop production and post services.

The Post Group is now able to incorporate digital intermediate (DI) services and state-of-the-art stadium-seating theater of its neighbor iO Film. ■

New Products & Services

by Jay Holben



Trio of Illumination

For years I've looked at Mole-Richardson sort of as the Old Faithful of the motion-picture industry. They are the patriarchal lighting company whose standards all others strive to meet or beat, and provide the basis from which most of our basic lighting and grip technology stems. I was pleasantly surprised to learn of Mole's three new fixtures, one of which is a unique, never-before-created fixture, and I was anxious to try them out for myself.

The first, largest, and most notably typical fixture is the new 12/18K HMI DayLite Fresnel fixture (Type 6801). At first glance, this unit and all the others in the new family don't look as if they belong to the Mole-Richardson line

at all. Where's the famous maroon enamel coating? These new fixtures are updated to compete with the more "cool-looking" tools on the market today, and bravo to Mole for daring to break out of their well-branded style. The silver-and-black DayLite fixtures are all well-thought-out and crafted. The new 12/18K has a 24 $\frac{3}{4}$ " borosilicate Fresnel lens with a nice tight pattern (no large center ring) and very smooth, even light distribution. The fixture has a lot of standard accoutrements that set-lighting technicians have come to expect from modern fixtures, including well-placed grip positions that stay relatively cool while the lamp is burning, sturdy ears for diffusion, doors and accessories, smooth spot/flood crank, and so on. In addition,

Mole features a few more touches that impressed me. It is the facility/owner's option whether or not to set the accessory ears at 90° or 45°, which is a nice touch for those who are picky about this.

One of the biggest advanced features of the new DayLite 12/18K is the advanced cooling design. To assist this, Mole has removed the igniter circuitry from contact with the housing and lowered it, placing it away from the main fixture and installing heat vents between it and the bottom of the lamp housing. The heat vents themselves are very efficient and maintain light spill extraordinarily well. In the lowered circuitry, Mole has installed an easy-to-access hinged panel that allows rental staffers or individual owners to access the electronic innards without trouble. The top accessory ear has a one-touch button release that is fantastic. I wish all fourth-ears had this feature.

The head weighs a fairly standard 150 pounds and works with the standard Power Gems/Mole-Richardson 12/18K square-wave electronic ballast.

I found the head to be pretty noisy, however; while I was working with the unit, it emitted a bit of an annoying, high-pitched whine. Under normal circumstances at a distance from the set, this repetitive sound won't be too much of an issue, but it may very well drive to distraction any lighting technician who finds himself working with the unit in a Condor basket.

All in all, my impression of the 12/18K DayLite is that it is a great fixture, exactly as one would expect from Mole-Richardson. There isn't any real grandeur about it, no really new or amazing advancements, just solid modern refinements that make it a robust and workable addition to any lighting arsenal.

The second new fixture in the



DayLite line is the 1.2K HMI Par (Type 6631). At 11¼" x 11½" x 18", the fixture is a bit large for a modern 1.2K. The one I tested had a horrible lamp in it with color temperature readings above 10,000°K, which may account for the

rather egregious color fringing I was seeing without a lens in the fixture. The light output without the lens was nowhere near as efficient and clean as the output of the unit's big brother, the 2.5/4K DayLite Par. Of course, most

users will not burn this fixture without a lens in place, and once I started slipping lenses in the fixture, performance improved greatly. Even with just the narrow 4.5-degree lens in place, the color fringing was smoothed out and I was looking at a usable source. My measurements of the lamp's photometrics agreed nearly perfectly with

Mole's published numbers, with the narrow lens giving me 6,460fc at 15 feet and the Fresnel giving me 250fc.

Unlike the 12/18K, the 1.2K did not demonstrate optimal cooling abilities. After burning the fixture for only 20 minutes, I found that the main touch points were more than uncomfortable without gloves. Just unlocking the tilt on the head was a difficult task to achieve and most of the areas immediately in contact with the head were very hot to the touch. Additionally, the handles on the lenses are far too close to the light-output area on the face of the lens, so I was cooking my knuckles while replacing lenses.

The accessory ears were mounted at a 45-degree angle and the top ear spring-locks under a flange when it is in the closed position. This is one of the worst designs for locking fourth ears I've ever run across, and unfortunately many manufactures use it. In the field, when these fixtures have been burning and you have to change out a lens or scrims, it is always a struggle to slide this extremely hot ear to the side and open it up. The one-button release currently employed in the 12/18K is a much better system for a locking fourth ear. In practice, I've found that when faced with a locking ear of this type, more often than not it's merely left open and completely unutilized. Why note omit it altogether?

The 1.2K Power Gems/Mole ballast has a dimmer capable of reducing the light output by 50 percent; surprisingly, I found that to be extremely accurate. Although the drop-off was not even throughout the dimming range, at the 50-percent marker it was exactly 50-percent output.

The fixture has a flood and spot control and a nifty little indicator window on the side of the fixture housing that shows you where full spot is — oddly enough, in the middle of the flood/spot range.

The 1.2K also features a detached igniter housing to separate it from the main lamp house, and a flip-



down panel that allows the user to access the circuitry.

Although I did not necessarily observe the efficiency, the 1.2K features a Brytal aluminum parabolic reflector that is purported to provide 96 square inches of reflective surface with a tighter, custom-formed lamp opening to maximize light output.

All in all, I was not impressed with the DayLite 1.2K. It seemed to *almost* have the kind of advancements that I saw in the 12/18K, but to a much less efficient degree. The head was too hot and some elements could certainly stand to be refined to improve the fixture.

The final new fixture is the 5K Tungsten Par (Type 6741). My first thought after seeing this unit was "Why?" Why would anyone want a 5K tungsten Par when a 4K HMI Par has much more efficient light output for less wattage and heat output? The answer is merely "Because *someone* might like the benefits of a Par and not want to deal with the problems associated with an arc source." Okay, I can deal with that. Once I got past the initial question, I found the 5K to be the most exciting and best-performing fixture of the trio.

The 5K Tungsten Par features a brand-new 5K globe manufactured by GE specifically for this fixture. The size is nearly identical to the 2.5/4K DayLite HMI Par, but at just 25 pounds, it is an incredibly light lamp, and the easiest 5K fixture for one person to work with that I've ever seen.

Just like its sister, the 2.5K/4K, the 5K Tungsten Par uses all the same accessories (save for the omission of a ballast). You can put in any lens of your choice, although I smiled at the lack of a Fresnel lens in the kit. I figure if you're going to make a versatile fixture that caters to a relatively small user base, why not expand that a bit and give us the option to turn this into a smaller 5K Fresnel as well?

Spot/Flood is smooth, although a very short range. Like the 1.2K DayLite, the side of the fixture features a visual indicator as to where in the spot/flood range you currently are, and

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I find this to be a wonderful tool. I wish the 12/18K had one as well. At about 13' with no lens in the fixture and the lamp in the full-flood position, I measured a field angle on the light output of about 9' with a beam angle of about 2'7". The center hot spot read 5,000fc and the edge of the field angle read 260fc. With the lamp in the full-spot position, the field angle shrank to 6'3" and the beam angle grew slightly, to about 3' with a reading of 6,200fc in the center spot and 270fc at the edge of the field angle. Color temperature was nearly perfect at 3210°K. These are nice readings, but really nothing compared to the DayLite 4K HMI at the same distance with 35,000fc in the center spot! The tungsten unit is putting out less than 20 percent as much light as its HMI sibling, which leads me again to ask: Why do we need this fixture? The 5K Par certainly packs more punch than the standard 5K Fresnel, with an output of 10,800fc at 10' with no lens and a light spread of 1.7', as compared to the 5,800fc of a 5K Mole Baby Senior at 10' and full spot with a 1.9' light spread. It is actually more comparable to a Mole Baby 10K, offering nearly identical photometrics with a wide lens at 10' and 1,688fc output (as compared to the 1,600fc output of the Baby 10K).

The heat vents on the 5K Par work wonderfully well, and I was very impressed with the lamp's touch points and how cool they stayed, even after more than 40 minutes of burn time. I was able to comfortably focus the unit with no gloves on — and this is a feature that really grabs my attention. Even the heat vents themselves don't get too hot, as nearly all of the fixture's heat is focused out the front — and man, does it *cook* out there! Even when 5' away from the lens, I felt like I was being hit with a huge laserbeam that was baking my skin. Just the second or so it would take to cross in front of the fixture as I worked with it was extremely uncomfortable. I certainly wouldn't want this fixture within 15' of any talent without more protection between them and the lens.

There is no front lens on the

fixture, which surprised me. Mole has put in a double wire guard, one made of stainless steel mesh and the other of wider, stamped sheet metal. The heat coming off the lamp itself is such that even with a nearly brand-new fixture, the gold coating on the stamped sheet metal had already burnt off to a dull silver. The designers omitted the front glass element in order to provide airflow to deal with the intense heat inside the fixture, and I certainly can't blame them for that choice. Lamp replacement is done through the front via three Phillips-head screws.

All of the lenses performed very well, creating smooth and even fields that were much cleaner than the 1.2K HMI or even most 2.5K or 4K fixtures that I have worked with in the past. The handles on the lenses are positioned far enough from the glass to make them easily removable, although the lens itself is so incredibly hot that I was hesitant to put it back in the case even after about five minutes of being away from the fixture.

The fixture can be addressed via a DMX controller.

One final touch that I haven't seen before is an adjustability in the yolk position on the head. Via a 5/8" Allen screw, the user has five or six different positions he can use to adjust the head balance on the yolk. I was confused for a moment as to what the purpose of this feature might be, until it was explained that if this fixture was frequently used with an attachment such as a Chimera soft box, the yolk position could be adjusted to make the fixture naturally back-heavy to help counterbalance the Chimera and make it easier to focus — a very nice detail.

Overall, the 5K Tungsten is very well-designed and performs excellently. As much as I would rather turn to a more efficient 4K to get better light output for nearly the same power consumption, this is a great fixture. I imagine if I had it on a job or two, I would repeatedly find uses for it.

For more information on any of the three fixtures, visit www.mole.com or call (323) 851-0111. ➤

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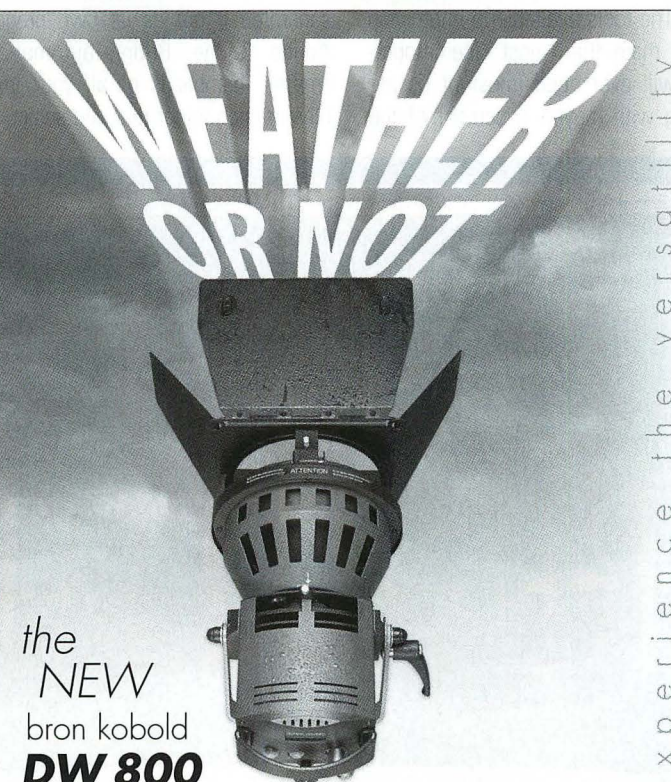
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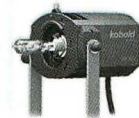
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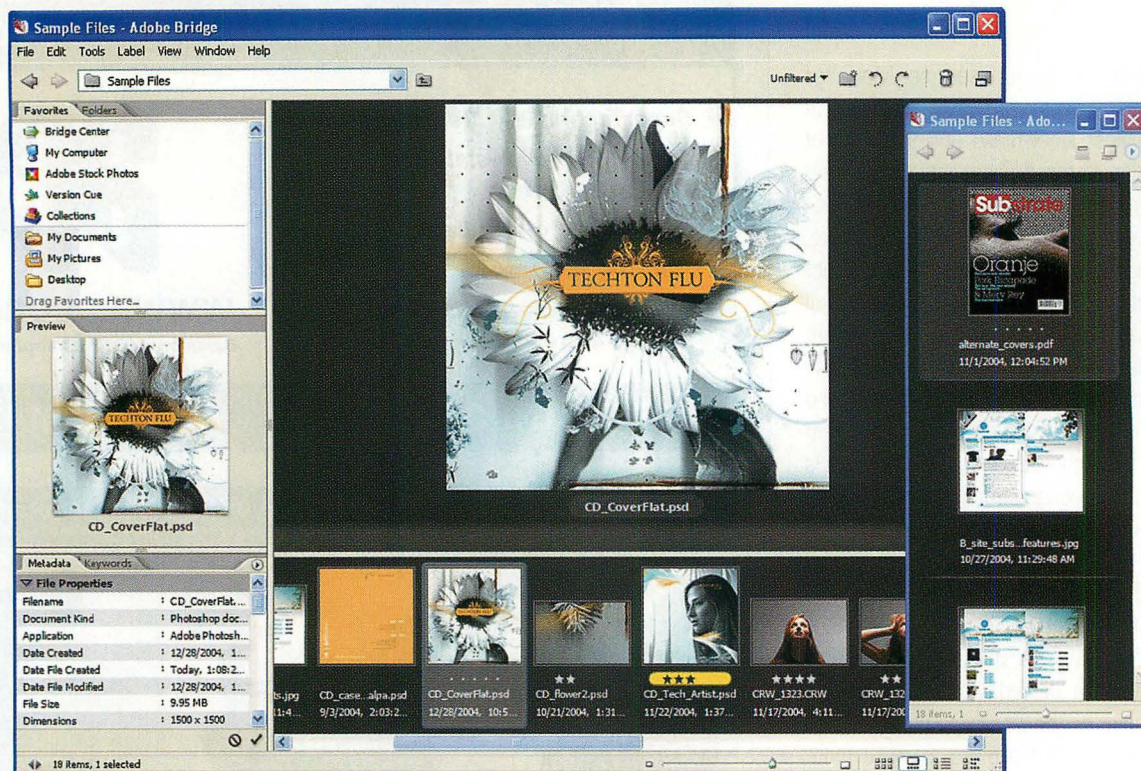


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**Adobe Bridge.
Below the
Optical Lens
Correction filter.**



Photoshop CS2's New Tools

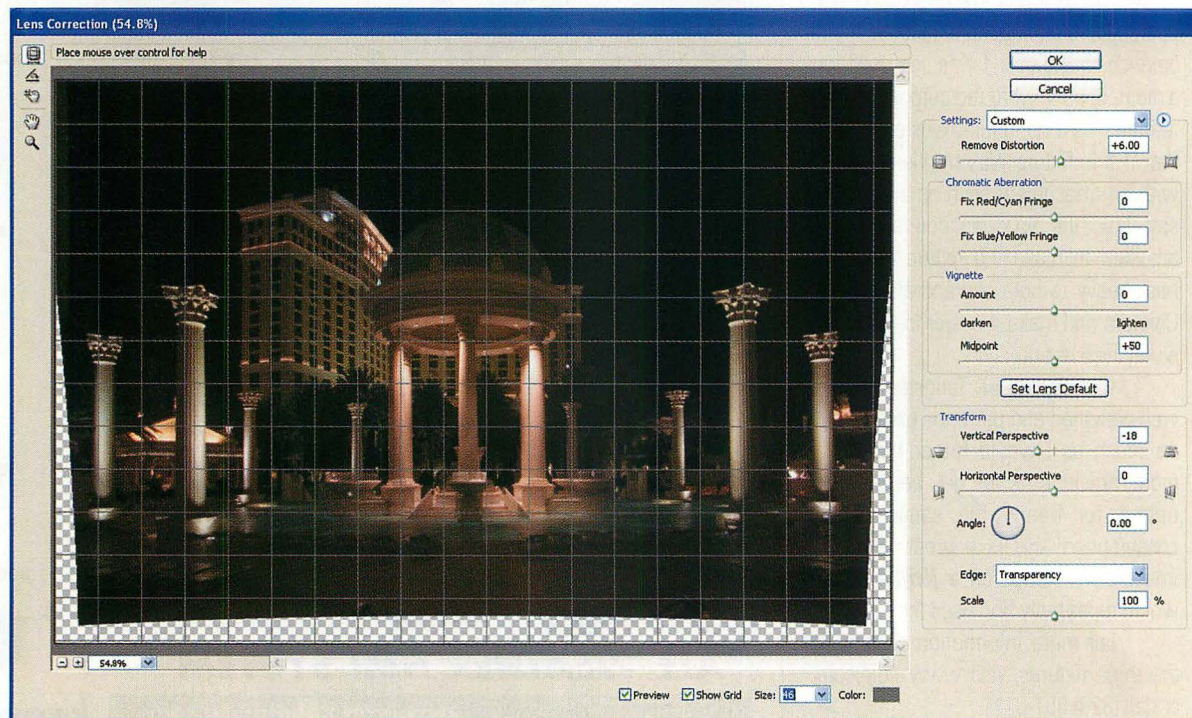
Adobe Photoshop has long been the leader in image processing, and the new Photoshop CS2 allows the program to maintain that honored position.

The tools available in Photoshop are far more than most cinematographers will ever need (most of us are working with maybe 5 percent of the

program's capabilities), but CS2 offers some new features that are worth noting.

First off, Adobe has taken the File Browser from Photoshop 7 and CS and separated it out as its own program, Adobe Bridge. Bridge automatically creates thumbnails of all your image files in each folder that you select, and

all of the thumbnails are scaleable to your preferred size, nearly in real time. On a Dual 2-gig G5 running OSX with 2.5GB of RAM, Bridge bogged down a bit on a file with 1,600 still images, but within two minutes all of the images had thumbnails. Bridge makes it easy to add notations and metadata to each file to adapt the search and cataloging func-



tions of the program to the user's needs. Bridge can work with camera Raw images to do batch processing, adjusting, cropping, and processing multiple images as necessary. Bridge features drag-and-drop functions with most Adobe applications (Illustrator, Photoshop, InDesign) and quite a bit more. For those times when it's necessary, Bridge also offers a slideshow feature. On the Mac, this is hands-down the best image-organization tool I've found, a far cry better than iPhoto.

CS2 offers HDR (High Dynamic Range) support and even a feature to create 32-bit HDR files from standard digital-camera images that have been exposure-bracketed.

For those cinematographers who may have been frustrated that the powerful Photoshop program paled compared to many inferior consumer freeware programs in the area of red-eye reduction, fret no more. CS2 now incorporates this very simple ability into its vast arsenal of professional image-processing tools.

A fantastic new tool in CS2 is the Optical Lens Correction filter. This easy-to-use tool incorporates a grid system to help correct for barrel distortion or pincushion, chromatic aberration, vignetting and three-dimensional perspective flaws in digital photos. It can correct any of these anomalies in one pass with an intuitive interface.

Probably the most impressive new tool in CS2 is the Video Preview function. With your computer connected to a FireWire device (IEEE 1394), which is in turn connected to an NTSC or PAL video monitor, you can now preview any Photoshop file directly on an NTSC or PAL monitor. I often find myself working on image graphics for import into After Effects and Final Cut, and the ability to preview the graphic in the correct color space on a calibrated monitor is worth more than its weight in gold.

There are many more new additions to CS2, which you can learn about at www.adobe.com/products/photoshop/newfeatures.html, or by calling (408) 536-6000.



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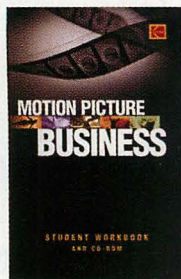
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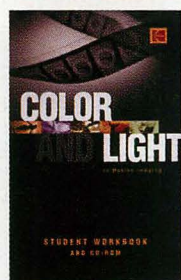
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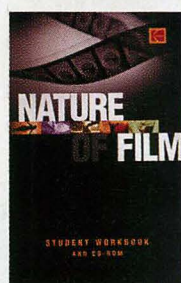
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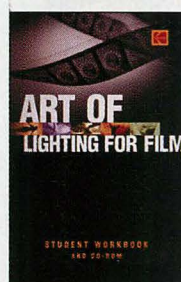
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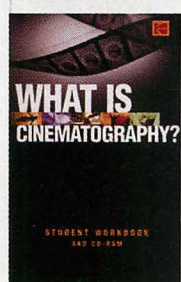
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A New Show on "The Right Coast"

The ASC and *American Cinematographer* will participate in the inaugural New York Cine Equipment Show, which will take place Sept. 20-21 at the New York Hilton Hotel, 1335 Avenue of the Americas. Show hours will be 9:30 a.m.-5 p.m. on Sept. 20, and 9 a.m.-5 p.m. on Sept. 21.

The New York Cine Equipment Show will focus on motion-picture equipment, goods, services and postproduction, and more than 60 companies are expected to exhibit their wares.

"The New York film community has been in need of such an event for some time, and when we first heard of it, we signed on immediately," says Peter Abel of Abel Cine Tech. "With all the production choices and new technologies that are now available, the timing for this show couldn't be better."

At press time, ASC cinematographers scheduled to participate in lighting workshops and seminars at the show included James Chressanthis, Fred Murphy, Harris Savides, Allen Daviau, Kees Van Oostrum, Michael Goi, Stephen Lighthill, Constantine Makris, Mathew Libatique, Laszlo Kovacs, Ellen Kuras, Sandy Sissel, Jon Fauer, Anastas Michos, George Spiro Dible and Sol Negrin.

Seminars topics will include:

- How to Create Artful Movies on a Small Budget
- POV: Show & Tell
- The Digital Intermediate
- Lighting 101
- Commercial Production From Concept Through Post

Exhibits can be viewed free of charge, but there will be a fee for seminars. (Student discounts are available.) To register for individual seminars or for seminar packages, visit www.nyces.org. For more information, call Amy Trerotoli at (877) 815-4830. ■

Filmmakers' Forum

Shooting *Everwood* in Utah

by Brian Sullivan

Cinematographer Bruce Johnson has photographed feature films such as *Harold and Kumar Go to White Castle* and *Drowning Mona*, and he is currently shooting the hour-long episodic drama *Everwood*, on which I am the A-camera operator. Johnson's key crewmembers on the show, including key grip Kevin Kennedy and gaffer John Farr, have worked on features such as *Old School*, *Hoosiers*, *Bicentennial Man*, and *Dumb & Dumber*. We are well versed in the cinematography requirements of a feature film, and although shooting *Everwood* is much different than shooting a feature — primarily in terms of time and budget — the expectation of excellence is not so different.

Everwood is filmed on location in and around Salt Lake City, Utah. A portion of the budget is spent capturing the beauty of the Wasatch Mountains, and it can be expensive to transport the cast and crew to the top of the tram at Snowbird Ski Resort. (The set medic brings oxygen tanks because the oxygen is noticeably thinner at 11,000'.)

Our cast features newcomers like Emily VanCamp and veterans like Treat Williams. The show does not rely on action or effects; it is not a crime labyrinth or a hospital spectacle. Instead, *Everwood* addresses relationships and life's inevitable struggles, and shines its spotlight on the characters and their plight in a complex world. "Everwood is not a gritty show about the seedy side of life," says Johnson. "Our show is about characters who are beautiful people in one way or another. There's a certain inner beauty to everyone, and that needs to be brought home. This drives the look of the show; it's about the landscape of the face and the



Director of photography Bruce Johnson (center), A-camera operator Brian Sullivan (far left), dolly grip Glade Quinn (far right) and first AC Mike Lookingland set up on location.

architecture of the body."

Each episode of *Everwood* is filmed over eight 12-hour days, and there is a certain amount of pressure to curb overtime. Circumstances occasionally warrant a longer day, but the aim is to steer clear of additional shooting days, or the high "double-time after 12" rates.

On a feature film, a cinematographer might have 50 days of filming and 14 days of prep. The assignment is to use those 64 days to create a quality feature film that will last about 100 minutes. On *Everwood*, our assignment is to use eight days to create a quality episode that will last about 43 minutes. Johnson meets this challenge by creatively using all available resources to make the most of his limited production time.

This challenge is typical of an episodic drama, which is more like a marathon than a sprint. We film 22 episodes per season, which keeps us busy from July until the following April. Scouting locations, preparation and pre-lighting are accomplished not prior to filming, but during filming. Hence, it's

crucial to establish smooth coordination between production management, grip and electric best boys and a rotating group of assistant directors. Johnson describes the *Everwood* crew as "a cohesive and veteran team. It's not just the camera, grip and lighting departments that have their act together, but the whole production staff. The assistant directors and our on-site producer, Tom Luse, run a very tight ship. We have to be efficient."

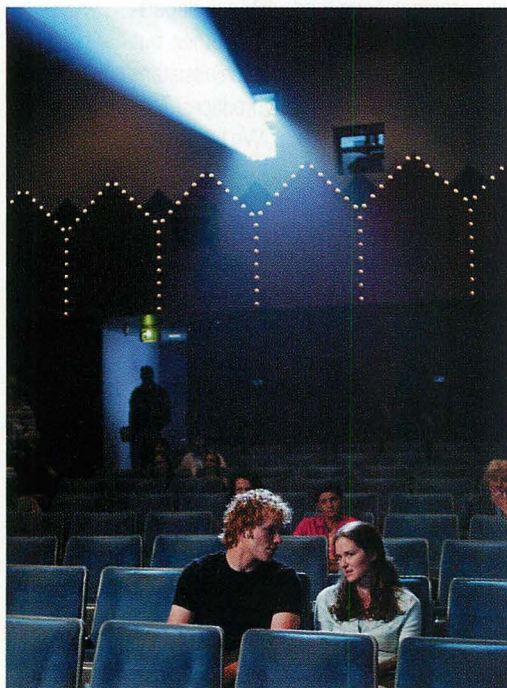
The episodic drama assignment is similar throughout television. Johnson's problem-solving approach is, to some degree, similar to those employed by cinematographers on other series. However, Johnson and company have come up with many inventive methods to achieve the necessary quality and stay within the time constraints.

Two complete camera crews are often used on episodic dramas. On *Everwood*, two cameras are available almost 100 percent of the time. Practically the only time Johnson deploys one camera on a shooting day is when the tightness of the set prohibits two cameras. "Obvi-



Above: Ephraim Brown (Gregory Smith) and girlfriend Amy Abbott (Emily VanCamp) check out their reflections.
Below: Bright Abbott (Chris Pratt) and his girlfriend, Hanna (Sarah Drew), wait for a movie to begin.

ously," he points out, "it would be nice to film with only one camera, but our shooting schedule demands two cameras. On *Everwood* we've found some very productive uses for two cameras. There are situations and there are ways and means to use two cameras at the same time and not have to compromise too much. We often design the blocking to accommodate our two-camera approach. If we feel that our two-camera approach is a noticeable compromise, we throw in the towel and use one camera."



1. A master or introduction shot;
2. A 50/50 profile shot;
3. An over-the-shoulder on the girl;
4. A close-up on the girl;
5. An over-the-shoulder on the boy;
6. A close-up on the boy.

With one camera, this scene would require all six of these setups to be shot separately. Moreover, if the actors need three takes per setup, they will repeat the dialogue 18 times! Johnson could cover such a scene with three setups, using two simultaneous cameras for each setup. The master and the 50/50 profile would be the first setup. The over-the-shoulder and close-up on the girl would be the second setup. The over-the-shoulder and close-up on the boy would be the last setup. As a result, the actors need only repeat their dialogue half as much, saving everyone a significant amount of time and energy.

There are many idiosyncrasies and variations to Johnson's two-camera approach. In a rush, it is possible to shoot both sides of a conversation with the same lighting setup. Sometimes the two cameras can be "leapfrogged" through a day's work, leaving one camera behind to shoot an insert while the other moves on to the next scene. Johnson notes, "If we have a group of actors sitting around a table, we can light the scene for two-camera coverage. We can accommodate the many possible eyelines across the table. We can deliver many angles and sizes because we design our lighting and coverage for two cameras."

Efficient and creative use of two cameras can be a challenge, of course. As Johnson notes, "You have to be on your game more. I think one camera would be simpler, because you just have to think about the one shot and everything will serve that one shot. With two cameras, you have to serve two shots."

Key grip Kennedy notes, "When the actors are being prepared by the hair, makeup, and wardrobe departments, Bruce uses that time to light the scene. He lights for coverage and for

The use of two cameras simultaneously can be very advantageous. The actors benefit from this approach, because they don't have to repeat the dialogue as many times. When the actor does achieve peak performance in a take, it is not recorded once but twice, in two complementary angles. The *Everwood* editors and script supervisor also enjoy the use of two synchronized cameras because of the perfect continuity of action within a single take. As Johnson explains, "Aside from getting all the coverage we need, it allows the editors a certain amount of flexibility. We all know that filmmaking is a lot about editing — it's about tempo and rhythm. The use of two cameras allows our editors to cut into a tighter shot of the same actor at the same moment. This would not be possible without an exact match."

The two-camera benefits for the script supervisor are obvious. When Johnson covers an actor in a medium shot and a close-up simultaneously, there is perfect continuity. Gestures, postures, hair, wardrobe, props and even the patterns of cigarette smoke are exactly the same, thereby heightening the sense of reality and eliminating mismatches.

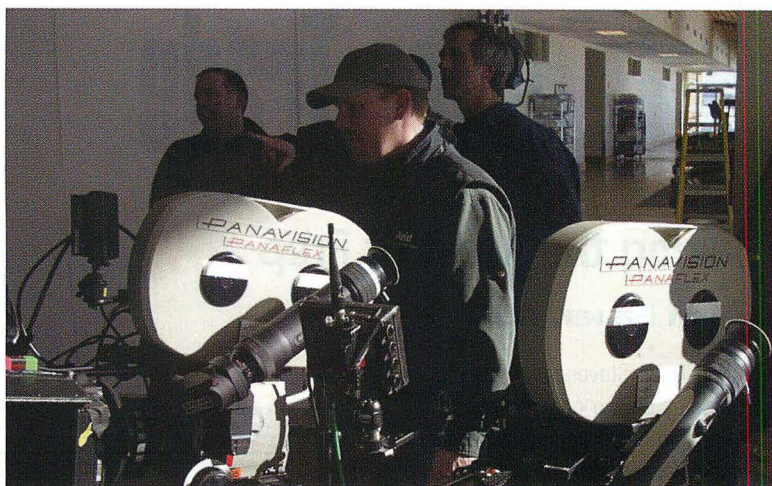
Possibly the biggest benefit from the use of two cameras is simply speed. If you have a simple scene with a boy and girl having lunch, you might use six setups or shots:

two cameras. He asks us to put lights in obscure places. We often use complicated rigs instead of light stands. We have to suspend the light just outside of the frame lines, and we use wall spreaders a lot. We also use speedrail, the grown man's erector set."

Things can get complicated when four or five actors are moving around an interior while two camera crews (two operators, two focus pullers and two dolly grips) follow the action in unison. If you include a couple of boom operators, the shoot can require the choreographing of 12 or more people! Johnson notes, "We devised a rig that allows us to mount two Panavision cameras on one Fisher 10 dolly. Eliminating one dolly and one dolly grip works well, especially when the two cameras have to be within one inch of each other. Obviously, for a medium over and a simultaneous tighter over you want the cameras to be as close together as possible to keep the eyeline from getting too wide. We try to pull back from the actors and use longer lenses — say, a 50 or 60mm for the medium over and a 100 or 110mm for the closer shot. It works best if we can get back 11 feet from the subject."

Johnson and the crew go to great lengths to accommodate the actors. The two synchronized cameras often adjust to actors who miss a mark. Johnson offers, "Frankly, this show is very much about the actors. The success of the show is based on the characters these actors are portraying and how well the audience connects with them. No one will tune in to watch this show because the lighting is great or the camerawork is cool — they might for an episode or two, but ultimately the longevity of our show depends on the actors."

When Johnson designs a shot, he often asks for "dance floor" so that his two cameras can respond to the actors. He reasons, "One of the complaints or comments that I have heard from actors is that they often feel restricted and distracted by marks and inflexible camera setups. Within our two-camera approach, we work to accommodate performance. Our actors



Left to right: Producer Bruce Miller, Johnson and director Tom Amandes line up two cameras in a hospital.

can hit a mark as well as any actor, but we work to take a little pressure off of them by putting [the responsibility] on the dolly grip. If we use long lenses, say 100mm or 150mm, the narrow corridor can hamper the actor. They could be on their mark and still block the camera's view by just leaning or shifting their posture. Instead, we create a situation where the actor doesn't have to worry about leaning a little to the left or right. They are free to move. We don't ask the actors to be overly exacting or precise about hitting marks. We adjust with the cameras to line up the composition, especially with the longer lenses."

Kennedy recruited veteran dolly grips Glade Quinn and Johnny Johnson for *Everwood*, and he notes that "our dolly grips are asked to help the operator compose the shot. Each dolly has a video monitor so they can see the composition. It's not just up and down, left or right on the floor. They watch their monitor and they compensate for the actors' positions or postures. This frees the actors up — they don't have to be statues."

Gaffer Farr and the electrical department have done their parts in *Everwood's* concerted effort to achieve quality and at the same time be fast. With two cameras, actors that are not restricted, and complex camera/lighting setups, tremendous pressure is put on the electrics. At one point, Johnson and Farr heard through the grapevine that a new light had been developed by Arri-flex. This prototype light, the Arri Sky

Panel, is simple and quick to deploy, and it also offers an improved quality of light. Farr describes it this way, "We're always trying new things to speed things up and make the look better. The prototype light we're testing this season has a thin profile, so it's easy to position and hide. You can hang it on a wall like a picture frame, and it doesn't generate much heat. The best thing about this light is that the globe itself is the big, soft source. It's not like putting diffusion on a regular tungsten light or a bank of Kino Flos. This source is actually a rectangle, 17x14 inches. It employs a new globe technology and the color rendition is perfect, with no abstract color spikes. In the tungsten mode it is exactly 3200 degrees. In the daylight mode, it is exactly 5600 degrees. When you dim this light, the color temperature doesn't vary. It's really been quite a development. So far, though, only a limited number are available." Johnson adds, "The new Arri light is particularly good at rendering skin tones. A couple of our actors really look their best when we use it."

We continue to apply innovation and creativity to our assignment on *Everwood* in our ongoing effort to film a quality drama within the constraints of an episodic budget and schedule.

Brian Sullivan is the A-camera operator on Everwood, which airs Monday nights on the WB Channel. ■

Tools of the Trade

Making the Most of Prep

by Jon Fauer, ASC

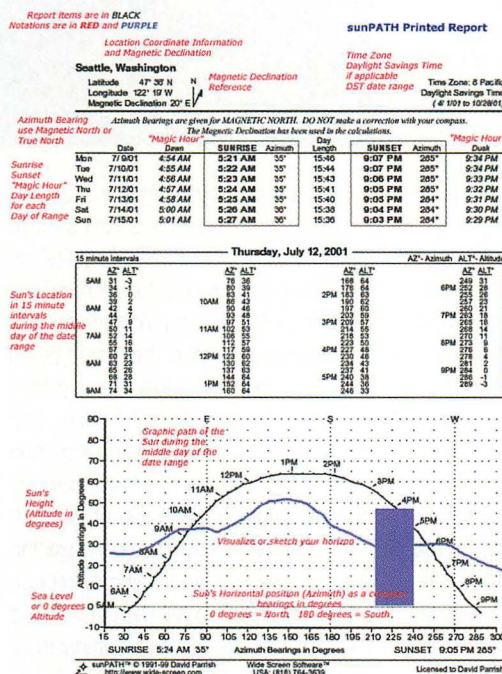
Robert Louis Stevenson wrote, "Politics may be the only profession for which no preparation is necessary." In filmmaking, preparation is everything, and it's called preproduction. Ad agencies have branded "pre-pro" into their unique vocabulary, which includes the inevitable "pre-pro meeting," at which there is much agonizing over wardrobe that will never be worn and props that will never be seen.

There are three ways to show up at a location scout: empty-handed (you have a great memory), traveling light (with a pad and pen), or carrying the latest Cinematographer Bag from the ASC Store, filled with all the latest tools and software for preproduction.

It's not a mystery which option will impress the producer and director, help the crew and expedite production. You can't be too prepared. Once production begins and you're running on empty, slogging through the 13th hour of the 13th day, good notes and thorough planning are a lot better than Red Bull or luck. Having the right tools for prep is not only helpful, but also fun.

Sun Position

Of course, the night before, we've printed out sunrise, sunset and sun position using David Parrish's SunPath program, which is available for Mac and PC from Wide Screen Software. Choose a location from the extensive database of every place on this planet, select the date, and print out a chart of sun positions as well as a graph-



ical display of height and angle.

I also carry around a set of Sundicators, plastic disks with quick-reference sun positions — not as accurate as Parrish's, but helpful in a pinch. Unfortunately, the inventor, Thomas Spencer, died in 1995, and I haven't seen them for sale since.

On location, we can tell exactly when the sun clears a large building, and where to place the camera so the actors will be backlit. The Suunto Tandem, also available from Wide Screen Software, is a sighting compass and clinometer in one handy housing.

Director's Finder

The Kish Optics Mini Director's Finder is small and light enough so you don't have to keep handing it to your assistant to carry. It covers 1.33:1,

1.66:1, HDTV, 1.85:1, and anamorphic; in 35mm, the range is 18 to 200mm.

Digital Still Camera as Finder

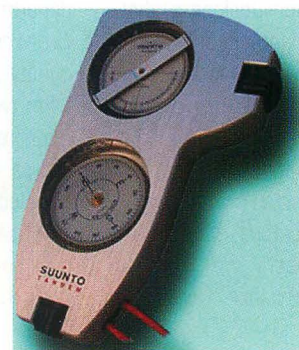
There's nothing like bringing a set of primes and an optical finder for exact previsualization. But that box of lenses is heavy. Wouldn't you rather have a zoom, and wouldn't you like to save the information? Bring along an SLR digital still camera. I like the Canon EOS 20D, Nikon D70s and Nikon D70 because they are lightweight, relatively inexpensive, and shoot JPEG as well as the RAW or NEF

files required by Kodak Look Manager System.

Best of all, the image sensors of these digital still cameras are pretty close in size (approximately 15mm high x 22.5mm wide) to the 35mm motion-picture aperture we all know and love (16mm high x 22mm wide). Okay, silent aperture is 17.5mm x 23.5mm on some systems and 18.7mm x 24.9mm on others, but you can do your own arithmetic adjustments.

On the Nikon, try the 12-24 DX, 18-55mm and 55-200 DX 55-200mm zooms.

Note that the DX lenses cover a smaller area (called APS-C, 15mm x 22.5mm), and are slightly smaller and





lighter than their full-frame 35mm x 24mm still-format relatives.

On the Canon, try the 10-22mm EF-S, 18-55mm EF-S and 70-300mm EF. Canon's EF-S lenses are similar to Nikon's DX in their smaller image area and shorter flange focal depth.

Math 101

To convert digital still APS-C 15mm x 22.5mm to 35mm motion-picture format, you don't have to convert at all! Just read the number off the barrel.

To convert digital still APS-C to full-frame 35mm still format, multiply the digital still lens focal length by 1.6.

To convert 35mm motion-picture format lenses to 35mm full-frame stills format, multiply the motion-picture lens focal length by 1.3.

Comparable Lens Angles for 35mm Still & Motion Picture Cameras (approximate)

horizontal angle	35mm still frame	35mm cine frame
77°	18mm	15mm
65°	22mm	18mm
61°	24mm	19mm
54°	30mm	25mm
47°	35mm	28mm
44°	40mm	30mm
35°	50mm	40mm
26°	75mm	50mm
23°	80mm	60mm
12°	160mm	125mm

Metadata and Chart Tape

"Not good enough! I want exact frame lines," you say. Take the gate out of your motion-picture camera and take it to your friendly Canon or Nikon repair facility. Use the gate as a stencil to mark the non-user removable groundglass of the digital still camera. (Actually, it's a

laser-etched plastic viewing screen.)

Next, return to your rental house or wherever you're doing lens tests. Aim your motion-picture camera with actual lens on a large white surface. Have an assistant mark the corners with black paper tape. Then, sight with your digital still camera at the same distance. Wrap 1/4-inch chart tape around the zoom scale. Mark the lens barrel of the digital still lens with the equivalent focal length.

But there's an easier way. Each digital still you took has metadata, more

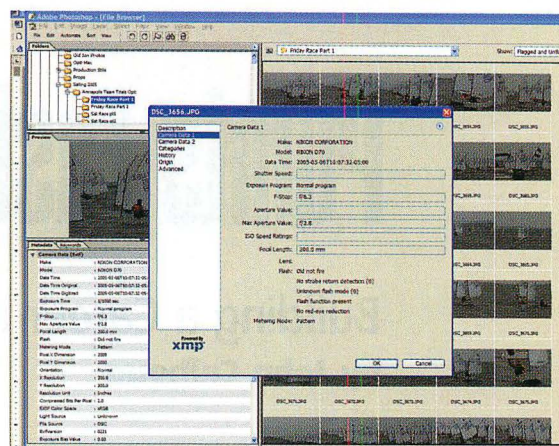


information about the shot than you'll probably ever need — including GPS location data. Open Photoshop CS, use the browser, and note the focal length of the shot. You can right-click or option-click and select "File Info."

I compose edge to edge horizontally, knowing that I'll mask top and bottom of the selects later in Photoshop for the format we're using.

Palms, Computers and Notebooks

Although I have an undeserved reputation as a gearhead, easy prey for almost anything new, I still find Palms, handheld organizers and laptops cumbersome on scouts and sets. During prep, a standard college-rule, spiral-bound, three-hole-punched notebook is still the best tool of all. It's the repository of notes



about everything: diagrams, floor plans, ideas and the nearest good restaurants.

Putting It Together

Back at home or in your hotel room, sort your images in Photoshop Browser. Make a "proof sheet" (File-Automate-Contact Sheet II) of your selects.

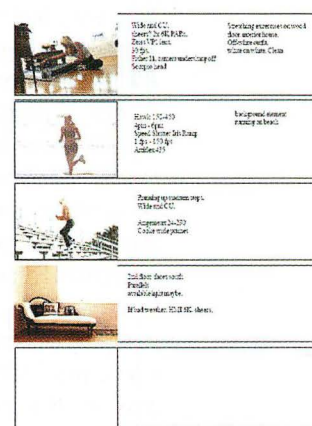
Make a three-column template in Word, Quark, InDesign or Pagemaker.

Copy the selects into the left column. You have the beginning of a storyboard. The middle column is for camera notes: camera, lens, dolly, lighting, mood and equipment. The right column is for everything else you'd like to remember: talent requirements, production notes, set design, props, wardrobe, etc.

Next, make an equipment list. Most of the rental houses have checklists, and many of us have generated templates in Excel.

All that's left now is to enjoy the shoot.

Jon Fauer, ASC publishes Film and Digital Times, a bi-monthly survival guide to film and video production that is available by subscription from the ASC Store (www.theasc.com) or at www.fdtimes.com.

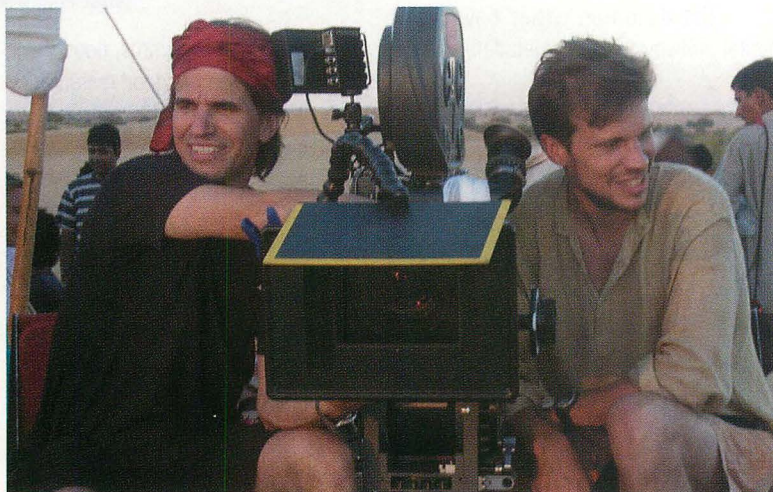


Points East

Building a Career in New York

by John Calhoun

New York-based cinematographer Harlan Bosmajian (right) traveled to India to shoot the anamorphic film *Rajapur*. On the left is 1st AC Manuel Beliter, his assistant on over six features.



Recently, Harlan Bosmajian's name has been popping up all over the place. In the past year, the New York-based director of photography has had three critically acclaimed films — *Brother to Brother*, *Winter Solstice* and *Saving Face* — in release. Another, *The Great New Wonderful*, attracted attention at the Tribeca Film Festival in April. And in June, the series *Stella*, also shot by Bosmajian, premiered on Comedy Central. "It's been a good year," says the cinematographer, who has four more features awaiting distribution. "I've been doing this for 10 years now, and I'm slowly beginning to understand how it all works."

Bosmajian could be referring to the tricks and tools of the trade, but he could just as easily be talking about the business of negotiating the busy, often frustrating independent film scene as a cinematographer. Years of toil on projects that go nowhere can suddenly pay off when a flurry of luckier movies make deals and see the light of day. It happens to Los Angeles-based cinematographers as well, but it seems to be a more common tale on the East Coast.

From the beginning, however, Bosmajian made more of a splash than some. Given the option of film school at California Institute of the Arts or at New York University, the Seattle native chose the latter because he "decided New York was the more inspiring place to live and work." He emerged from NYU with a strong narrative-based reel, and soon attracted attention with his work on David Riker's black-and-white feature *La Ciudad (The City)*. That 1999 release garnered Bosmajian an Independent Spirit Award nomination, as well as an agent.

Around the same time, he got a gig on another Comedy Central series, *Strangers with Candy*, which was one of the first shows shot on high-definition (HD) video. "It was a really new technology, and the producers and I liked its look," says Bosmajian. "It felt very modern at the time; it didn't feel like video and it didn't feel like film." As HD caught on, he found himself in greater demand, and he shot some commercials in the format as well as the features *Lovely & Amazing*, *The Great New Wonderful*,

Shooting Livien and *Live Free or Die*.

In the last few years, the cinematographer started using a P+S Technik Pro 35 adapter when shooting HD and other digital formats. "It allows you to use film lenses on video cameras and get the depth of field of film," he notes. "When you're shooting for video, you have to light a lot of different layers to create a way for the eye to be drawn into the picture. If everything's in focus, the image feels kind of flat. With the adapter, you have that depth of field that's more like the human eye. The only problem is that it creates a slightly softer image, because [the light] is going through more pieces of glass."

This is not an issue when shooting for television, he adds. When planning *Stella*, which takes its title from the absurdist comedy troupe at its center, Bosmajian wanted to shoot HD with the adapter, but for financial reasons the pilot was shot in DigiCam format on 24p Panasonic DVCPro cameras. "I shot the pilot on that, thinking that when the series got picked up, we'd have some more money and could shoot it on HD," says the cinematographer. "But they liked the look of the show so much that they wanted to keep that same lower-resolution." Bosmajian says shooting *Stella*, which divides its time between a Brooklyn studio and citywide location work, is some of the most experimental work he has done. "There is a lot of poking fun at pop culture and at different film genres," he says of the show, which he likens to modern-day Marx Brothers comedy. "What's great about the show is that we can take those genres and heighten them when we're shooting." For the show, Bosmajian uses the P+S Technik adapter and Zeiss

Superspeed lenses.

Though he has shot a lot of HD, Bosmajian's two most recent features, *Winter Solstice* and *Saving Face*, were shot on 35mm. With *Winter Solstice*, a somber drama about a widower and his two teenaged sons, "the mood was such that it just kind of had to be film," he says. In the case of *Saving Face*, a lighter tale of Chinese-American generational clashes, "the director was adamant that she didn't want to shoot on video; she wanted it to look like a full-blown romantic comedy."

On some projects, Bosmajian guides his collaborators in a particular direction when the subject of format arises. "For the comedy *Live Free or Die*, we talked about shooting Super 16mm, but they were first-time directors and it was a character-based story, so there was the potential for shooting a lot of takes," he says. "I thought we would get more substance out of shooting HD. We shot it with a [Panasonic] VariCam, and I loved the way it looked."

Having made his name in features, Bosmajian says he wishes he could land more commercials. "I've gotten a lot of jobs shooting HD for different commercials, but it's because 'he's the HD guy,' not because 'he's the commercials guy.' But I definitely can't complain. The variety of projects has been great" — for example, before *Stella* he shot an anamorphic film, *Rajapur*, on location in India — "and I no longer feel like I have to shortchange my standard rate just to get a job."

He wonders whether his career would progress differently on the West Coast, however. "I have a feeling that there may be a limit to how far a director of photography can go in New York, unless you really stick it out and specifically become known as 'a New York cinematographer.' Something as simple as going to a meeting makes a big difference — I do a lot of phone meetings with directors in Los Angeles, but it's not the same as being there in person. Part of me wonders if I should give Los Angeles a try, but I love New York. The energy here is more in sync with my personality." ■



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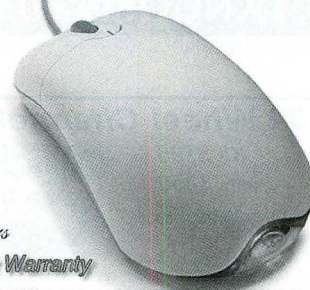
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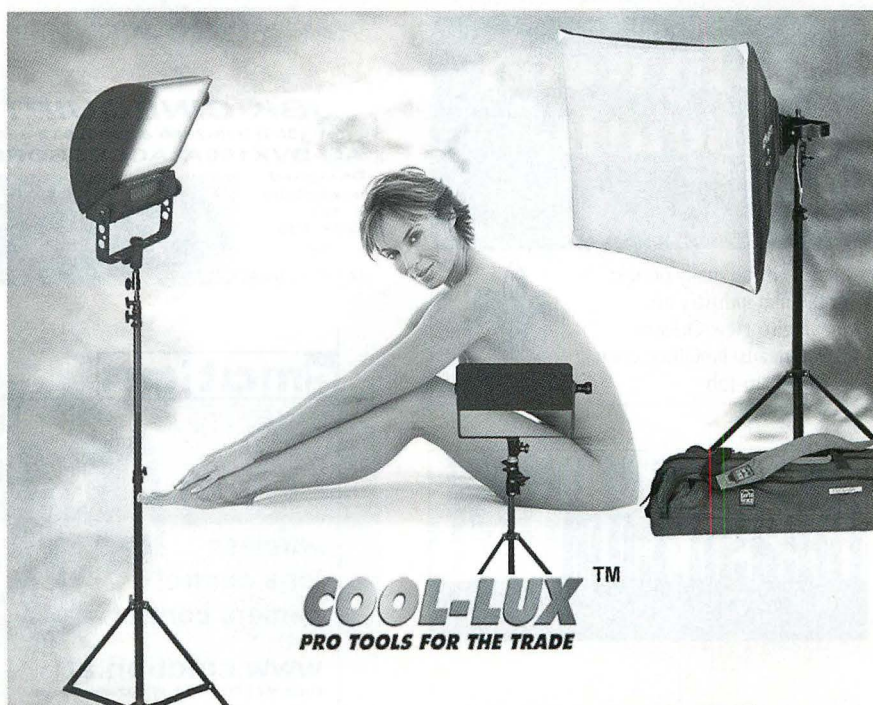
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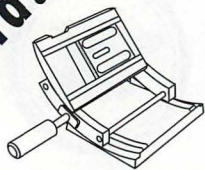
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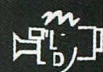
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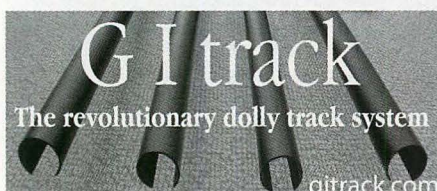
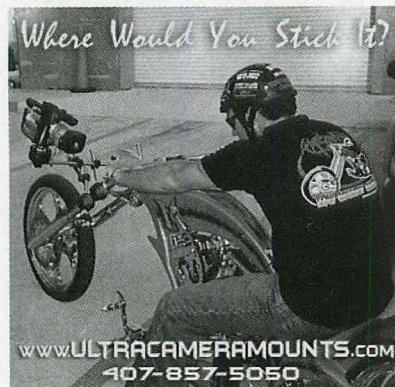
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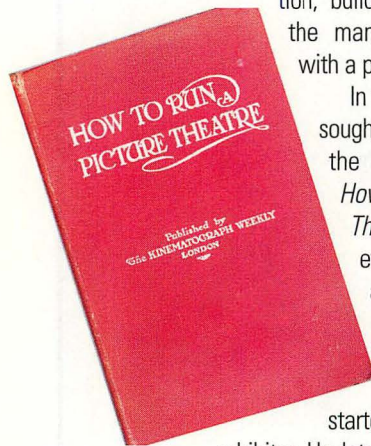
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The Samuelson Library

Running a Movie Theater

by David W. Samuelson

This page, bottom right: A 1912 camera suitable for shooting "local topicals." Note the viewing (focusing) tube passing through the center of the camera. Opposite page: A 1912 35mm Butchers Projector.



Until comparatively recently, *The Kine Weekly* was a leading British weekly trade magazine. It had started life as a monthly, *The Magic Lantern Journal*, in the latter part of the 1800s. In 1905, it became *The Optical Lantern and Kinetograph Journal*, and in 1907, it was renamed *The Kinematograph and Lantern Weekly*. By 1912, having grown to more than 100 pages a week, it noted: "Notwithstanding these enormous strides, which have developed in ratio to the wonderfully increasing popularity of motion pictures, there has not been produced a standard handbook containing information on the preparation, building and arranging of the many details connected with a picture show"

In 1912, the publication sought to fill this void with the slim 130-page book *How to Run a Picture Theatre*, which details every aspect of building and running a movie theater. It so happens that that is exactly the year my father started out as a small-town exhibitor. He later became a local film distributor, and finally a film producer ... and the rest, as they say, is history. When I handle this book, I sometimes wonder if he had a copy of it when he started in the film industry, and whether it had an influence on my being here today.

The following are word-for-word extracts from the book. Much of the advice is as valid today as it was in 1912:

On selecting a site: "It requires but a very slight stretch of memory to go

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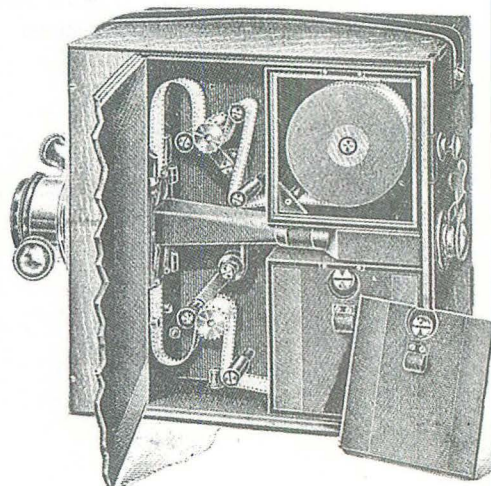
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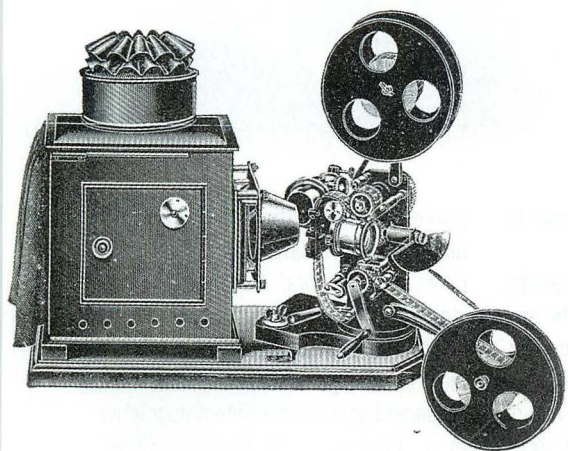
The manager: "The manager should be a man of methodical business habits, quick at feeling the pulse of the public, but above all, one who can make himself popular with the *habitués* of the place."

The ushers: "The attendants who show people to their seats can help you to make friends or they can drive trade away. Part of their duties should be to keep the house tidy while it is open. If they do this and give proper care to the seating of new arrivals, they will not

have much time for flirting, but if they exhibit a tendency in that direction, warn them that a repetition of the offence will act as an automatic dismissal, and stick to it."

The pianist: "The pianist is another important item. Get a good one — the best you can afford. This does not mean a concert pianist, for such a player would be worse than useless, and for the same reason do not get one of those who want to show off at the expense of the picture. Hire someone to play the pictures, and the patient plodder with a fair technique will sometimes be found to be better than a brilliant performer who has a soul above the pictures, and who is continually boasting that Paderewski and De Pachmann are not the only two great artists. The showy performer who can rattle off three or four concertos and some small encore pieces has no place in the scheme of the picture house ... a pianist who knows how to play to pictures is an acquisition to any theatre and £2 to £3 a week is none too much to pay him. Where there is an orchestra, of





course, the pianist's salary is allocated to the conductor."

Program and chocolate sellers: "There is no need to enumerate or enlarge upon the duties of the program and chocolate sellers, except to urge that the vending of their wares shall not be too stentorian, for nothing detracts more from the pleasure of the patrons than to have a loud-voiced boy or girl continually bawling in one's ear 'Chocolates!' or 'Programs!'"

The operator: "I turn now to the Man at the Wheel, who has the making or ruination of the show in his hands. You can build a sumptuous theatre, furnish and decorate it with a lavish hand, and drag the people in by force if you will, but unless the picture is properly projected, you will never fill the theatre day after day and week after week. The public talk, they advertise the theatre, and once you let them go out disgusted with the picture because it is badly projected, you may as well close down."

The value of local topicals: "There can be no two opinions as to the value of the local topical film as a means of filling your theatre. Everyone loves to see himself or herself, or friends, or children on the screen, and the local topical is the best means of gratifying this desire."

How to take topicals: "Now to come to practical details. How is the local topical to be taken in, say, a small town, where the operator is the only available person to do the work? If tackled in the right spirit, it ought not to prove a difficult task; in any case, it does not present difficulties that are insurmount-

able. In the first place, your operator, no doubt, has more than a fair working knowledge of photography. Given that and a modicum of common sense and patience, and the rest is comparatively easy"

What you mustn't do: "In conclusion, it may be worthwhile for the operator new to the work to copy out the following list of 'Don'ts' and to keep it permanently before him:

"Don't turn the handle with the cap on the lens. Keep the cap on and reverse into the top box if an arrangement for this is provided. If not, punch the film and make a note to cut this portion off.

"Don't expose on a distant scene after taking a near view without altering the focus. No remedy.

"Don't expose on a sea and sky scene after a dull scene without altering the stop. The result will be hopeless overexposure and *vice-versa*.

"Don't leave the camera handle at home. If you do, find a clever blacksmith, or else go home and fetch it.

"Don't take out film boxes without take-up rollers.

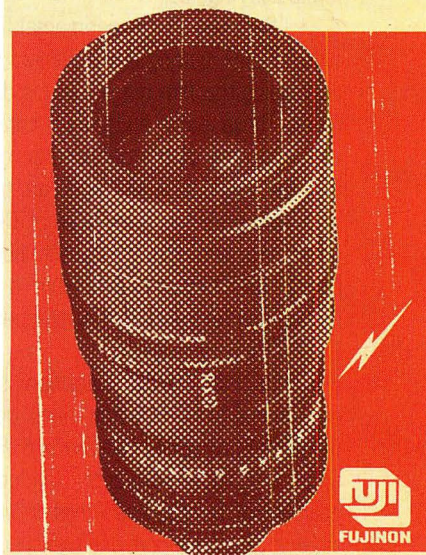
"Don't leave out the plug of end of viewing tube. If you do, it will result in a fogged picture.

"See that your film is properly fixed to a take-up roller. If it is not, the film gradually accumulates in front part of camera until the space will accommodate no more, the turning gradually becomes harder and finally stops. Not an altogether infrequent occurrence, and a most hair-raising experience. If miles away from a dark room, the only remedy is to open the camera and take out the pleated and jammed film, throw it away and make a fresh start. If, however, you can take your camera to a dark room, the subject may often be saved."

David W. Samuelson is a BSC, BSKTS and SMPTE member and an ASC associate member.

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From the Clubhouse



New Members

The ASC recently welcomed Eric Saarinen and Peter Wunstorf to its ranks.

Artistic pursuits came naturally to **Eric Saarinen, ASC**, the son of architect Eero Saarinen (designer of the St. Louis Arch, among other distinguished attractions) and sculptress Lily Swann Saarinen, and godson of designers Charles and Ray Eames. Born in Michigan, Saarinen studied at Goddard College in Vermont, where his emergence as a filmmaker was marked by the film he made for his senior project. He then went on to a two-year graduate program in film at the University of California-Los Angeles.

Saarinen shot experimental films with a Bolex, cutting in the camera and developing the film himself in his darkroom. These early endeavors, created with the help of his godparents, gave him the foundation to shoot art films with such artists as Andy Warhol, Claes Oldenburg and Robert Rauschenburg. During that time, he also shot a 16-minute film for PepsiCo that screened at Expo 70 in Osaka, Japan.

In the 1970s, Saarinen shot educational films, industrial films, documentaries (including *Fillmore* and *FTA*), and television projects (including episodes of *The Life and Times of Grizzly Adams*, *Special Report*, and two specials with Jacques Cousteau). He began his feature career shooting low-budget films for Roger Corman, and he went on to a successful series of collaborations with Albert Brooks (*Real Life*, *Modern Romance* and *Lost in America*) before turning fully to the commercial world as a director/cinematographer and a partner at Plum Productions.

Saarinen's commercial work for such companies as Jeep, Reebok, Nissan, Gatorade, Land Rover and KitchenAid has garnered him numerous awards, including five Clios, three Ad Age awards, three Chicago International

Film Festival Gold Hugo awards, and 15 Mobius awards.

Growing up in Alberta, Canada, **Peter Wunstorf, ASC** knew by the age of 12 that he wanted to be a filmmaker. He got his start by practicing with his father's 8mm camera, and by the age of 19, he was proficient enough to shoot news and commercials for a local television station. Within two years, he was working for the CBC's French News; at the time, the station was phasing out 16mm color reversal stock, and Wunstorf was one of the last cameramen on staff to shoot on it.

After three years at the CBC, Wunstorf entered the freelance world and began shooting music videos, documentaries and small narrative projects. His career in the feature world took off with the films *The Grocer's Wife* (selected to open "Critic's Week" at the 1992 Cannes Film Festival) and *The Michelle Apartments*, and he went on to photograph *Double Happiness*, *Mafia Princess*, *Road to Saddle River* and *Heart of the Sun*, among other projects.

Wunstorf has also had a prolific career shooting television pilots, and has earned ASC Award nominations for three of them: *Millennium*, *Smallville* and *Haunted*. (*Millennium* and *Haunted*

also earned nominations from the Canadian Society of Cinematographers.) His pilots include *Total Recall 2070*, *Dark Angel* and *Tarzan*.

Wunstorf is also active in educating the next generation of filmmakers. He served as a Mentor Cinematographer at a "Women in the Director's Chair" workshop and as an instructor at a lighting workshop for the Film and Video Arts Society/Alberta National Film Board.

Workflow in the Big Apple

In late May, Eastman Kodak hosted a seminar at Tribeca Cinemas in New York City focusing on the convergence of film origination and digital postproduction and their combined effect on workflow. "There are powerful new creative tools that enable filmmakers to accurately and efficiently ensure the artistic integrity of the looks they create from preproduction through postproduction," observes Ann Turner, vice president and general manager of Kodak's Entertainment Imaging Division. "The purpose of this dialogue is to explore this important issue from the perspective of filmmakers."

Filmmakers in attendance (pictured below) included Visionbox Media Group president and owner Chris



Miller, producer Brian Bell, LaserPacific president and ASC associate member **Leon Silverman**, and ASC cinematographers **Nancy Schreiber** and **Matthew Libatique**. Particular attention was given to such tools as Kodak's Look Manager and Display Manager systems, designed to help filmmakers maintain control and communicate their intentions with editors, colorists and other collaborators on a project.

CineGear Seminars

The ASC conducted a series of seminars at the ninth annual CineGear Expo, held in early June at Warner Bros. Studios in Burbank, California. **Curtis Clark, ASC** and ASC publicist Bob Fisher moderated a seminar called "Focusing on Vital Issues," featuring a panel comprising ASC Technology Committee members Lou Levinson, Glenn Kennel, Jim Houston, Marty Ollstein, Greg McMurray, Gary Morse, Al Barton and Andy Maltz, as well as ASC members **Stephen Lighthill**, **Michael Goi**, **Michael Negrin** and **Karl Walter Lindenlaub**.

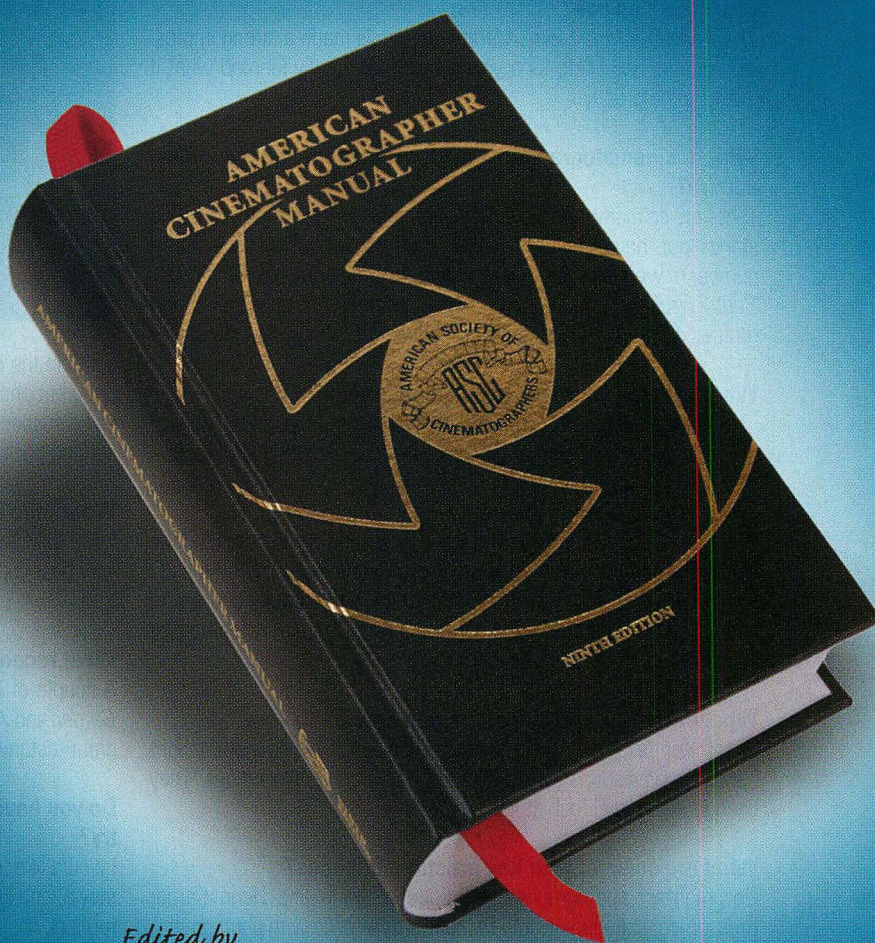
Another "standing-room-only" panel, "The Art of the Commercial," offered a discussion with cinematographer Ron Dexter, Clark and ASC members **Bill Bennett**, **Allen Daviau**, **Peter Lyons Collister**, **Guillermo Navarro**, **Jon Fauer** and **Jeff Cronenweth**; later that day, the torch was picked up by ASC members Daviau, **Steven Bernstein**, **Matthew Libatique**, **Wally Pfister**, **Nancy Schreiber**, **Dean Semler**, **Philippe Rousselot**, **Amy Vincent**, and **Phedon Papamichael**, who tackled "The Digital Intermediate Evolution."

George Spiro Dibie, ASC moderated "Lighting Scenes from the ASC Book *Reflections*." Participants included ASC members Daviau, Lindenlaub, **Isidore Mankofsky**, **Owen Roizman**, **Laszlo Kovacs**, **Denis Lenoir**, **M. David Mullen**, **Shelly Johnson** and **Ron Garcia**.

— Jon Witmer

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ASC CLOSE-UP

Levie Isaacks, ASC

When you were a child, what film made the strongest impression on you?

The Treasure of the Sierra Madre. Its visuals made a strong impression on me, and I felt, as a young boy, that I really learned what it meant to be greedy.

Which cinematographers, past or present, do you most admire?

There are so many, and I love watching the results of their work. One stands out, however: Conrad Hall, ASC. His agent told me that a number of well-known cinematographers turned down *Searching for Bobby Fischer* because it was a small picture with no visual opportunities. Conrad really took his craft to an art form in that picture.

What sparked your interest in photography?

I bought a really good 35mm still camera when I was in the service in Vietnam. I was drawn to the experience of capturing life there.

Where did you study and/or train?

I was fortunate to get a job at a local TV station while attending the University of Texas. There I was given a Bell & Howell DR-70, and I fell in love with the movie camera. I took photography courses in college and numerous lighting seminars, but mostly I learned by doing.

Who were your early teachers or mentors?

Victor Kemper, ASC and Woody Omens, ASC, who both taught hands-on workshops at the Maine Photographic Workshops. They changed the way I look at light.

What are some of your key artistic influences?

Documentary photographers W. Eugene Smith and Henri Cartier Bresson, for showing us how to make a difference with photography.

How did you get your first break in the business?

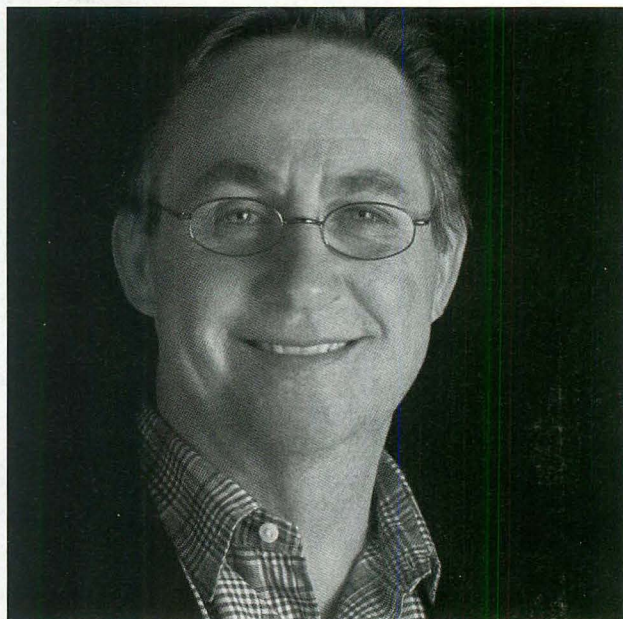
A sound recordist, Mark Ullano, recommended me to director Howard Cohen for a movie at Concorde Pictures, *Saturday the 14th Strikes Back* (1988). Since that picture, I have worked regularly in the business.

What has been your most satisfying moment on a project?

I once suggested a shot to a director on *Malcolm in the Middle* and Linwood Boomer, the creator of the show, intervened and said he would never use a shot like that. I set it up anyway, and when Linwood saw it, he changed his mind. That experience reminded me to keep trusting my instincts.

Have you made any memorable blunders?

I was doing second unit on a picture, and I made a list of lighting equipment for the shots requested. The producer, who was also the second-unit director, told me all he wanted was to see some head-



lights in the distance, so I did not need to light the shot. I disagreed but went ahead and did it his way. They were unhappy with the shot, as I'd suspected they would be. I was fired, and the next guy got the lighting package I'd asked for.

What's the best professional advice you've ever received?

I was told that Hollywood was a work-ethic town: do the work the very best you can and that will count the most. I have found it to be true.

What recent books, films or artworks have inspired you?

A couple of films I saw recently stand out in my mind: *The Secret Garden* and *A Little Princess*. Both are small pictures, yet they are still great testaments to visual storytelling.

Do you have any favorite genres, or genres you would like to try?

I would like to do an epic. *Lawrence of Arabia* is probably my favorite movie, and Freddie Young, BSC is another of my favorite cinematographers.

If you weren't a cinematographer, what might you be doing instead?

I was planning on being a lawyer, but the camera found me, and I am very thankful.

Which ASC cinematographers recommended you for membership?

Stephen Lighthill, Brad Six and Steve Shaw.

How has ASC membership impacted your life and career?

The future of our craft and our business is being heavily impacted by the coming of digital photography. The ASC Technology Committee is making a significant contribution to ensuring that cinematographers are heard by the manufacturers and studios. I believe this outreach effort is the most important thing the ASC is doing now, and that it will impact cinematography for years to come. The ASC is the voice of cinematographers, and we need to speak loud and clear. ■

CAPTURE YOUR VISION

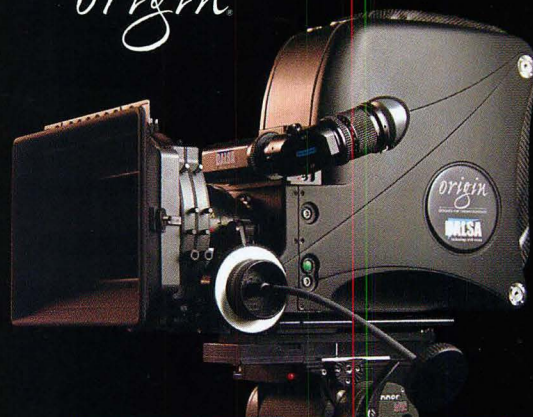
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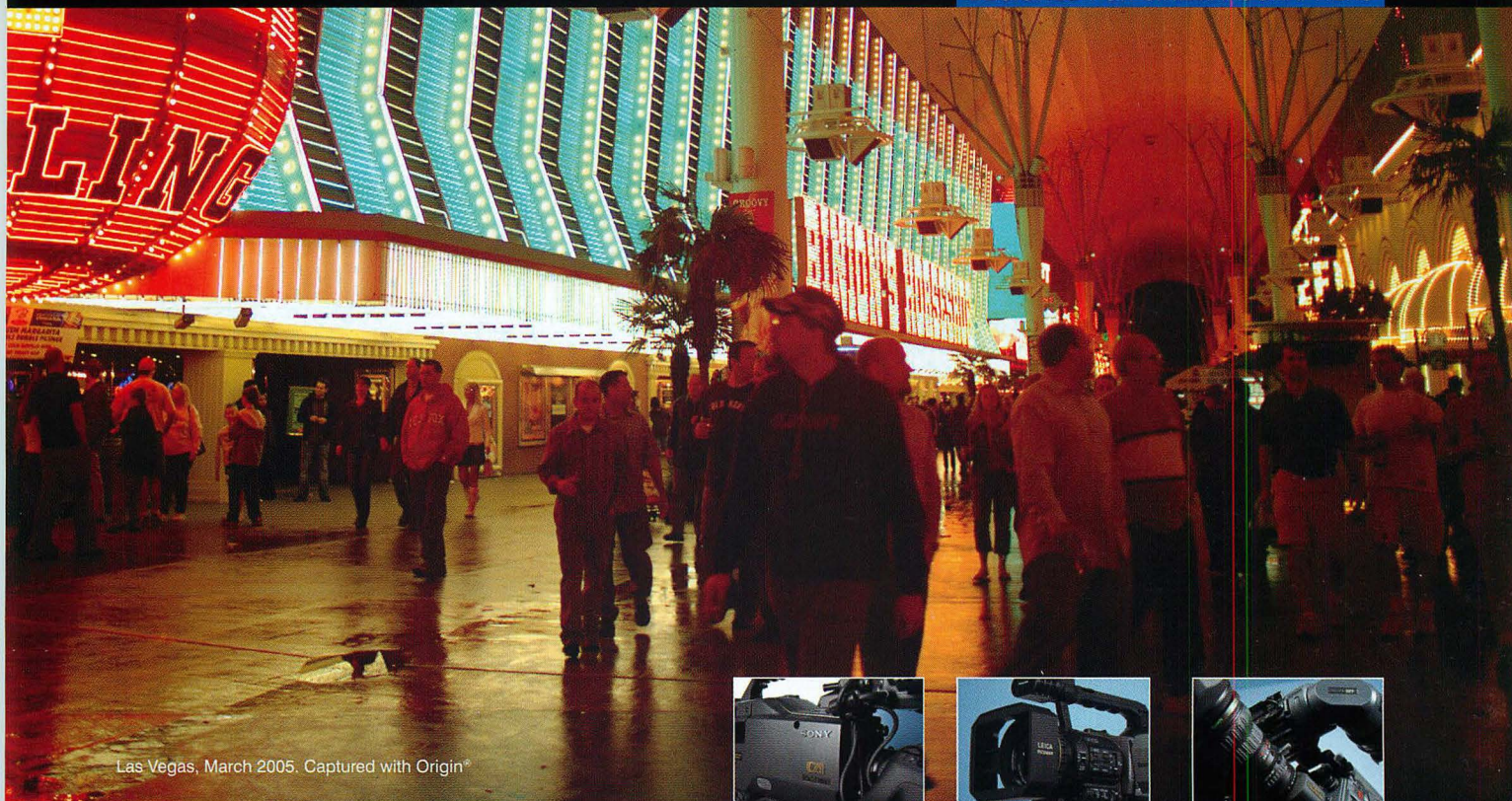
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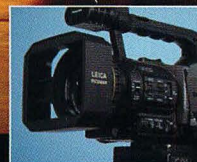
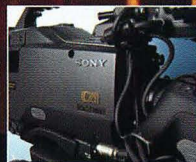
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PAUL CAMERON

"I went down the path of shooting commercials, music videos and concert films at the beginning of my career. It was a great experience. I'm the same person, but I've learned that filmmaking is more about subtleties than I had ever imagined. It's about translating scripts and performances into visual nuances that affect how audiences will ultimately experience the story.

It's one thing to read a script, but it's something else to really listen to the director tell you about the movie and figure out how he sees it in his head. I approach every director the same way, whether he is shaping or creating a motion picture or a shorter format script. Within the director's vision, I challenge myself to risk trying new things that are right for that story. The goal is to take the audience to another place and time and make an emotional impression. That's the absolute joy of filmmaking which has appealed to me from the beginning."

Paul Cameron has photographed such narrative films as *Collateral*, *Man on Fire*, *Swordfish*, *Gone in Sixty Seconds*, and the upcoming *In the Land of Women*, as well as hundreds of commercials, music videos, and occasional documentaries.

For an extended interview
with Paul Cameron
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